

**Purpose:** The purpose of this community worksheet is to provide a step-by-step guide for initially conducting proper due diligence on a community being considered for SMART MoBee enablement leading to a "GO or NO GO" decision for engagement. Each community is different with different challenges and needs. The analyst is encouraged to step outside the boundaries set forth by these guidelines and to amend the worksheet to add relevant community information captured during this process that are deemed important for decision-making.

## Suggested Steps for Analyzing a Community for SMART MoBee Enablement

### STEP 1: Gather Basic Community Information

Community Name: Cabuyao, Laguna

Analyst Name: JS, MP

Location: Philippines

Analyst Phone: \_\_\_\_\_

Analyst Email: support@sdinst.org

Type of Community: Local Government Unit (County, City, Living Community, Military Base, School, etc.)

Population: 355,330 (2020 census)

Description of Community:

Cabuyao is previously known as the "Richest Municipality in the Philippines". This was due to the fact of the large immigrants who work in the city. There are also lots of industrial estates in the city which include Nestle Philippines, Asia Brewery, Inc., San Miguel Corporation, Tanduay Distillers, Inc., Wyeth Philippines, Inc., Procter & Gamble Philippines, Light Industry and Science Park of the Philippines and Malayan Colleges Laguna have established factories or are located in Cabuyao.

The name Cabuyao originated from the word Kabuyaw, a citrus tree growing abundantly in the area which is used then by the natives in washing hair and later evolved as the town's location reference. Adopted by Franciscan friars and Spanish officials, it replaces the town's indigenous name of 'Tabuko'. Declared by Miguel Lopez De Legazpi as an encomienda or town in 1571, Tabuko was then the center of government, composed originally of barangays Malabanan (Biñan City), Sta. Rosa de Lima (City of Santa Rosa), and Calamba (Calamba City).

#### **Geographic Location**

The City of Cabuyao is one of the six (6) component cities in the province of Laguna. It is located at the northern part of the province and is 43 kilometers away from Manila. The city's longitude is 121.12472 East and latitude is 14.27833 North. It is bounded on the east by Laguna de Bay, on the west by the Cavite, on the north by Sta. Rosa and on the south by Calamba. The City of Cabuyao has 18 barangays: three are poblacion barangays, six are located along the national highway, six along Laguna de Bay and the remaining three are located on the western side near the Cabuyao-Cavite boundary. The city covers an area of 4,330 acres which is broadly classified into agricultural and built-up areas.

Major Income Sources: Industries, Commercial, Services, Agriculture/Farming

Tourist Destinations: Poor Clare’s Monastery, St. Policarp’s Parish Church, St. Vincent Ferrer Diocesan Shrine, Sta. Elena Golf Course and Country Club, Light Industry and Science Park I and Hall of City of Cabuyao

Special Events/Festivals: Cabuyao Day/Batingaw Day (Founding Anniversary), Cityhood Anniversary, Feast of Poor Claire, Barangay Fiestas  
(Source: <https://www.cabuyao.gov.ph/>)

Reason for considering this community for SMART MoBee Enablement: Project RISE (Resiliency Improvement Support and Education) initial target community. Goal of the mobile app is to support the implementation of disaster preparedness programs for the community.

**STEP 2: Assess the Community’s Website**

- a) Does the community have an existing website (Y or N)? If N, proceed to Step 3. Y  
\_\_\_\_\_
- b) Is the website owned & operated by the Governing Body of the Community (Y or N)? Y  
\_\_\_\_\_
- c) Is the website responsibly designed to support mobile devices (Y or N)? Y  
\_\_\_\_\_

Please describe the types of information and services provided on the website in the box below:

Website link: <https://www.cabuyao.gov.ph/>

Top Link: Home, News And Events, About, Officials, Links, Procurements

News and Events - COVID-19 updates, government news (\* The page hasn’t been updated since March 2021)

About - history, mission, vision

Links - government departments at national level (ex: DOH, DOLE)

**STEP 3: Assess Community’s Mobile App**

- a) Does the community have a mobile app or multiple mobile apps or social media? Y (No Mobile App)  
\_\_\_\_\_

For each community mobile app or social media account you discover, please provide the information below:

Mobile App Name or Social Media Name	Mobile App or Social Media Description of Functionalities	Link
City Information Office of Cabuyao City Official Facebook Page	Followed by 119,000 Latest COVID-19 updates and city government news	<a href="https://www.facebook.com/ciocabuyaoph">https://www.facebook.com/ciocabuyaoph</a>
Cabuyao Mayor’s Official Facebook Page	Followed by 117,000 Mayor’s announcements and updates	<a href="https://www.facebook.com/MayorGecolea">https://www.facebook.com/MayorGecolea</a>
Cabuyao City Disaster Risk Reduction and Management Office Official Facebook Page	Followed by 30,000 Provides weather updates, disaster warnings, and guidelines on how to respond to disasters like earthquakes.	<a href="https://www.facebook.com/CabuyaoCDRRMO">https://www.facebook.com/CabuyaoCDRRMO</a>

**STEP 4: Research and Analyze Community Challenges**

Conduct your research and due diligence on the challenges faced by the community and document below

Analysis of Cabuyao's Disaster Level Preparedness												
LGU Name	National Gawad Kalasag Awardee	Organized LDRRMC and LDRRMO	LDRRM Plan with Budget Allocation	Updated CLUP/PDPFP	Contingency Plan	Local Climate Change Adaptation Plan	Early warning system in-place	Evacuation Center management	SAR organized, equipped and trained	Prepositioning of relief operations, medical and security services	Standard Operation Procedures available	Disaster Preparedness Passer
Cabuyao City	●	●	●	●	●	●	●	●	●	●	●	●

The table above^ is from the [2014 Disaster Preparedness Profile](#)

Many areas in the province of Laguna are susceptible to floods and landslides, due to their vicinity of the Laguna Lake, and earthquakes because of their proximity to Taal Volcano. Despite the challenges, the LGUs don't access timely, accurate weather information. **Traditionally, LGUs relied on national or regional sources for weather updates, but this information is not often an accurate representation of the specific conditions of municipalities, making it harder for communities to coordinate their preparedness and response efforts.**

To enhance disaster preparedness and response capabilities of the region, the World Food Programme (WFP), along with the United States Agency for International Development's Office of U.S. Foreign Disaster Assistance (USAID/OFDA), in 2011 launched the Disaster Preparedness and Response (DPR) Programme. WFP worked with local government partners to pilot high-impact, small-scale community projects in 9 municipalities and 3 provinces across the disaster-prone provinces of Benguet, Cagayan, **Laguna**, and Sorsogon. In Laguna, four towns – Mabitac, Famy, Rizal and Pila – were the beneficiaries of the DPR project.

(Source:

- 1) <https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/Final%20WFP%20DPR%20Programme%20-%20National.pdf>
- 2) <https://lbtimes.ph/2013/08/19/modified-weather-stations-benefit-laguna-disaster-prone-areas/>)

**Key accomplishments from WFP DPR Programme include:**

- 1) Over 250 facilitators trained in contingency planning in 4 provinces and over 149 barangay-level contingency plans drafted by communities in 4 provinces
- 2) 41 Emergency Rescue Teams formed and trained in 4 provinces
- 3) Rehabilitated mangrove forests in flood-prone coastal areas in Cagayan Province
- 4) 3 Evacuation Centers upgraded; 3 Disaster Operations Centers constructed, and 3 Food and Seed Storage Facilities Upgraded
- 5) Trained 89 personnel from LGUs, NGOs, and academe in GIS in 4 provinces; 12 of them have been equipped as trainers and serve as core group for the establishment of GIS networks in other programme areas
- 6) Conducted training on Emergency Simulation exercises for government personnel at various levels (National Office, 4 regional offices, 4 provincial offices, and 9 municipal offices)
- 7) 7 Automated Weather Stations and 16 Automated Rain Gauges installed to strengthen community based early warning systems

(\*\* Source: <https://reliefweb.int/report/philippines/philippines-disaster-risk-reduction-saves-lives-laguna>)

In Laguna, WFP asked the University of the Philippines Los Baños (UPLB) campus to take the DRR-related scientific technology it developed to the local communities. The university utilized its DRR-applicable scientific technology across the province. One piece of technology which has been of great use to the communities has been the **Automatic Weather Stations**.

The UPLB's solar-powered Automatic Weather Station has addressed this by providing LGUs with the capability to monitor a multitude of information such as wind speed, temperature, humidity, and rainfall, among others.

With the technology, UPLB has provided the LGUs with their own "weather bureau". The LGUs and their respective communities now have real-time information. Through the data that the LGUs collect, they can create their own observations and weather patterns which they can use as references for the future.

Furthermore, these Automatic Weather Systems have been linked to the LGU's Early Warning System. Alongside flood level sensors and sirens, the Automatic Weather Systems' information feeds into the Early Warning System which is then broadcast to the community. Each alarm signifies a response to do early preparations or conduct evacuations.

UPLB has also developed IEC materials for a wide variety of audiences in Laguna, and for Cagayan, another DPR/CCA Programme area, including various videos, radio plug-ins, and even an interactive CD covering topics on preparedness and response. But the University is looking to push the boundaries and make this information readily available on smartphones.

**(\*\* We should check with the Manila Team to see if Cabuyao, too, has an AWS system in place, similar to the one provided by the university to the four areas of Laguna as part of the WFP's DPR program.)**

Resiliency Issues (e.g., Risks to Climate Change, Disaster Management, etc.)		
Type of Issue	Description	Source of Information
<b>EVALUATION OF THE RESILIENCY of the SILANG-SANTA ROSA SUBWATERSHED</b>	Silang-Santa Rosa Sub-watershed traverses through the Municipality of Silang, Province of Cavite in the upstream and three cities of Laguna which are Biñan, Santa Rosa, and Cabuyao in the downstream area.	<a href="https://ics-rnet.org/pdf/locarnet_meetings/2015/4th_annual%20meeting/day2/BS3-1.pdf">https://ics-rnet.org/pdf/locarnet_meetings/2015/4th_annual%20meeting/day2/BS3-1.pdf</a>
<b>Cabuyao's Proximity to Laguna Lake</b>	The province of Laguna, located a mere 30 kilometers outside the Philippines' capital of Manila, is exposed to a multitude of hazards, the primary of which is flooding. The overflow from Laguna de Bay – the province's largest lake – and inland rivers turn the farmlands into vast bodies of water due to heavy downpours, worsened by improper waste management. Over the years, flooding has damaged property, livelihoods, and the lives of the residences of the province.	United Nations Office for the Coordination of Humanitarian Affairs <a href="https://reliefweb.int/report/philippines/philippines-disaster-risk-reduction-saves-lives-laguna">https://reliefweb.int/report/philippines/philippines-disaster-risk-reduction-saves-lives-laguna</a>
<b>Earthquakes</b>	Department of Science and Technology Undersecretary and Philippine Institute of Volcanology and Seismology Executive Director Dr. Renato Solidum has urged officials and residents to always be on the lookout for earthquakes and increase their preparedness level since Barangay Casile <b>sits atop the active West Valley fault system</b> . Solidum elaborated how the city can likely be affected by the big one and why disaster preparedness is important. He called officials and residents to identify areas that can possibly be affected by the 7.2 magnitude quake, all referring to the powerful earthquakes that jolted Leyte and Batangas recently. "It is vital in the proper planning for the earthquake disaster to make risk assessments by classifying the possible damages like buildings and other structures to determine possible injured victims and casualties." Solidum said. He urged city officials, disaster managers, Village executives, the academe, the private sector, and all stakeholders to convince the communities here to prioritize disaster preparedness To save lives and properties... He explained that a large earthquake from the West Valley fault can significantly affect Metro Manila and surrounding provinces like Laguna,	<a href="https://www.pressreader.com/philippines/manila-bulletin/20170717/281719794632024">https://www.pressreader.com/philippines/manila-bulletin/20170717/281719794632024</a>

	hence the need to understand and appreciate the hazards and risks to prepare and respond appropriately.	
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**STEP 5: Research and Analyze Interesting Facts and Positives about the Community**

Conduct your research and due diligence on any interesting facts and positive community events or programs that helps build a positive image of the community. Look at social media to get a feel of any citizen sentiments, if possible. Look for interesting videos on YouTube that build the character of the community. Document your findings below:

Interesting Facts and Positives		
Type of Issue	Description	Source of Information
<b>Online Vaccine Registration Website</b>	The city government encourages citizens to register for COVID-19 vaccines at this website. Those who are not allowed to register online have to just go to the barangay to fill out a form in person.	<a href="http://www.cabuyaovaccine.com">www.cabuyaovaccine.com</a>
<b>Cabuyao City's New Command Center</b>	The construction of the new Command Center in Cabuyao City started last August 30, 2021. The center was established to ensure the timely, prepared and quick response of our Cabuyao City Disaster Risk Reduction and Management Office (CDRRMO) partner Management Information System, Cabuyao City Police Station (PNP), and Cabuyao City Fire Station (BFP). The goal is to have a better and centralized system and coordination for disaster response, peace and order, and emergency medical services. The center is located near the construction of PAGCOR Multipurpose Evacuation Center and Office of Civil Defense - CALABARZON. Currently, according to our City Engineering Office, the construction is expected to be completed in Aug, 2022.	<a href="https://www.facebook.com/CabuyaoCDRRMO">https://www.facebook.com/CabuyaoCDRRMO</a>
<b>The Pagcor Village Project</b>	<p>On May 13, 2021, Cabuyao in Laguna, a town surrounding the Taal volcano, received P50 million grants for housing and evacuation center projects from the Philippine Amusement and Gaming Corporation (Pagcor).</p> <p>The so-called Pagcor Village Project is designed to provide permanent shelters to less privileged families who were displaced by Taal Volcano's eruption in January 2020. Most of these families remain homeless until now.</p> <p>Cabuyao City plans to use the grants for the construction of a Multi-Purpose Evacuation Center (MPEC) which will soon rise in Barangay Banay-Banay - a strategic location since the city's Command Center and sports complex are also located there.</p>	<p>1) <a href="https://www.manilatimes.net/2021/05/22/public-square/batangas-laguna-get-p80-million-additional-grants-for-pagcor-village/1800170">https://www.manilatimes.net/2021/05/22/public-square/batangas-laguna-get-p80-million-additional-grants-for-pagcor-village/1800170</a></p> <p>2) <a href="https://www.pagcor.ph/press-releases/pagcor-releases-p100-million-for-evacuation-center-projects-in-kalinga-and-laguna.php">https://www.pagcor.ph/press-releases/pagcor-releases-p100-million-for-evacuation-center-projects-in-kalinga-and-laguna.php</a></p>
<b>The Universal Structural Health Evaluation and Recording (USHER)</b>	USHER is a 24/7 web portal & mobile application system that allows remote monitoring and analysis of the structural integrity of buildings and other structures and it enables economical and hassle-free compliance to government regulations. USHER technology could be a	1) <a href="https://www.dost.gov.ph/knowledge-resources/new">https://www.dost.gov.ph/knowledge-resources/new</a>

<p><b>Technology Boosts Disaster Readiness of Cabuyao and San Pedro Cities</b></p>	<p>big leap in disaster management in the region as it plays an important role in determining the safety and integrity of infrastructures before, during, and after an earthquake.</p> <p>This technology is a breakthrough in disaster management and tools and equipment. As the two cities face risks brought about by the earthquake, this locally developed technology will guide and help structural engineers as well as disaster managers in the monitoring and immediate assessment of infrastructure.</p>	<p><a href="https://www.usher-ph.com/news/2021/03/17/2021-news-2564-usher-tech-boosts-disaster-readiness-of-cabuyao-and-san-pedro-cities.html">s/72-2021-news/2564-usher-tech-boosts-disaster-readiness-of-cabuyao-and-san-pedro-cities.html</a>)</p> <p>2) <a href="https://www.usher-ph.com/">https://www.usher-ph.com/</a></p>
<p><b>DOST-PAGASA Weather Report</b></p>	<p>DOST(Department of Science and Technology) and PAGASA provides daily weather forecast reports on its YouTube channel, twice a day at 4 a.m. and 4 p.m.</p>	<p><a href="https://www.youtube.com/channel/UCPyLiki1x70S8UPxVqsPr6g">https://www.youtube.com/channel/UCPyLiki1x70S8UPxVqsPr6g</a></p>
<p><b>Disaster Preparedness Page on Panahon TV's YouTube Channel</b></p>	<p>Panahon TV airs real-time updates on weather, traffic, class suspensions, flight cancellations, red tide occurrences, and air pollution indexes. Known for having long advocated disaster preparedness, it distributes information on disaster preparedness, such as earthquake safety tips, through its YouTube channel.</p>	<p><a href="https://www.youtube.com/user/PanahonTV/playlist?view=50&amp;sort=dd&amp;shelf_id=2">https://www.youtube.com/user/PanahonTV/playlist?view=50&amp;sort=dd&amp;shelf_id=2</a></p>

**STEP 6: Your recommendation to “GO” or “NO GO” with SMART MoBee Enablement**

What is your recommendation (“Go” or “NO GO”)? Go

Please provide narrative in the box below to support your recommendation:

Cabuyao, Laguna is the initial target community for Project RISE.

Analyst Name: JS, MP  
 Analyst Phone: \_\_\_\_\_  
 Analyst Email: support@sdinst.org

Date: 03/17/2022

**STEP 7: If your recommendation is to “GO” with SMART MoBee Enablement and approval is given to proceed, go through the following workflow:**

- 1) Go to the next worksheet shown in the tab below entitled "SM Mobile App Design FW" and review and understand the guidelines before proceeding with the actual design process of the mobile app.
- 2) After reviewing the SM Mobile App Design Framework, you are now ready to design the mobile app for the community using the next worksheet entitled "SM Mobile Icon Map & Features." This worksheet provides you with the tool to establish your mobile app's roadmap that follows the guidelines set forth in the SM Mobile App Design Framework. This is where you'll design the screen levels, the icon layout of each screen, and the most tedious process, defining the properties (i.e., icon label or title, icon graphics to use, feature of the icon, the type of information and source of information may provide or an icon may just be redirect to another screen, etc.)

The final product you'll produce in Step 2 above, will serve as the cornerstone and most important document for the development



of the smart community. Allocate a considerable amount of time and thought on this process and it will serve all of us and most specially, our client or the community very well. You'll also learn so much about the community.

**Design Considerations:**

- 1) Try to keep the maximum number of icons to twelve (12) per screen level. SMART MoBee is designed to display a maximum of twelve (12) icons per screen. If there are more than 12 icons per screen level, then another screen on the same level will be generated in the background and the system will allow screen scrolling by swiping left or right. The number of dots below each screen indicates the number of screens on that level. Our goal is to prevent the user from scrolling through multiple screens or scrolling screens at all.
- 2) If more than 12 icons are necessary per screen level, then group the icons in order of priority from the user's perspective.
- 3) Keep the screen levels, when clicking on icons, up to a maximum of three (3) levels before displaying the information the user is looking for. Simply put, maximum of three (3) clicks before the information is displayed.
- 4) Keep the icon titles or labels descriptive and intuitive.
- 5) Look for meaningful graphics that can be used as a background for the main screen. For example, a background of a Government building or City Hall may be a good background for a municipality; the main building of an academic institution may be a good background for an academic community; and the front gate of a military base may be a good background for a military base community. Ensure that we either get permission to use the graphic picture or we can buy a royalty-free graphic picture when the mobile app goes live. If we're coming up with a mock up, we can probably use it as long as it's not officially published and presented as a proof of concept.
- 6) Look for a community logo or logos that we can incorporate into the main screen. Ensure that we either get permission to use the logo or we can buy a royalty-free graphic picture of the logo when the mobile app goes live. If we're coming up with a mock up, we can probably use it as is as long as it's not officially published and presented as a proof of concept.

**STEP 8: Envision the design and layout of the Smart MoBee Mobile App**

In the box below, please provide the design and layout that you envision for a Smart MoBee Mobile App for the Community, based on your findings of gaps that can be closed with the use of technology:

➤ **Dashboard Panel Layout**

Panel	Theme	Content
1st	COVID-19 Updates	1) Cabuyao's Online Vaccine Registration Page 2) COVID-19 Tracker in PH 3) National COVID-19 Vaccine Dashboard
2nd	EWS (weather information)	1) Links to PAGASA weather forecasts for now before our own WARN system 2) Emergency Hotlines (directory)
3rd	Disaster Preparedness	1) Directory + Map of evacuation centers 2) How to Guides (RISE Guidelines on what to do when a disaster, like earthquake, strikes) 3) RISE citizen training programs (CTP) 4) Learning from the Past: links to articles on prior disasters (ex: Info on floodings)
4th	LGU Services & News	1) Links to the City's Official Facebook + CDRRMO Facebook 2) Directory of departments
5th	Useful Apps or Websites (designed to enhance citizens' disaster preparedness capabilities, health, and wellbeing)	1) A link to USHER technology for earthquake prevention 2) Panahon TV's YouTube on Disaster Preparedness 3)
6th	Community Forum	1 ) Divided into topics: evacuation center related questions, disaster relief, general questions, etc. (** Capability to filter through questions with keywords so you can see if your question has already been answered) 2) Donation page (Page Feature)

➤ **Button Panel Layout**

Home	Incident Report	Directory (Emergency Hotlines & Evacuation Centers & Departments)	Disaster Education	Community Forum	LGU News
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