



# **CIVIC PARTICIPATION-BASED E-GOVERNMENT SYSTEM FOR SAN FERNANDO**

**FINAL REPORT**

# CPS

## SANFERNANDO

### Civic Participation System

Civic Participation System encourages direct civil participation in administration, so that limited administrative power can be supplemented. Also, it contributes public opinion either directly or indirectly to administration activities and pursues to provide citizen-centred services

How to use?



Google play



# Table of Contents

## 1 INTRODUCTION

1.1 Background	5
1.2 Objectives – Purpose of CPS	5
1.3 Project Scope and Methodology	6

## 2 ANALYSIS & DIAGNOSIS

2.1 General City Profile	7
2.2 Analysis on San Fernando's e-Government Environment based on On-Site Investigation	8
2.3 Analysis on San Fernando's e-Government Environment based on the CeDS investigation	11
2.4 Outcomes from CeDS diagnosis Profile	12

## 3 RECOMMENDED SOLUTION FOR SAN FERNANDO

3.1 Applicable ICT based city solution, CPS	34
3.2 Impact of CPS	45
3.3 Major Technical Specifications	46
3.4 Chronological Development Procedure of CPS Project	47
3.5 Service model suggestions for future upgrade	48
3.6 Timeline	49
3.7 Action plan(Next steps after this project)	50

## 4 CONCLUSION

Annex 1: Manual on CPS

Annex 2: Database of Information Collected from On-Site Investigations

### Document Information

Document No:	DOC-02	
Document Title:	Civic Participation System Report	
Project Title:	Civic Participation-based e-Government System	
Project Start Date:	July 2015	
Project End Date:	December 2015	
City Government:	San Fernando, La Union, Philippines (WeGO Member)	
Implementing Agency:	World e-Governments Organization of Cities and Local Governments (WeGO)	
Implementing Enterprise:	Consulting Enterprise, Mecander	
WeGO Project Manager:	Mr. WonYoung Lee, Consultant, Consulting Enterprise; Mecander	
Mecander Project Manager:	Mr. SungJin Cho, CEO, Consulting Enterprise; Mecander	
Status	For information	
	For comments	X
	As agreed	

### Document Revision History

Changes	Version	By	Date
First Revision - Document creation	Rev. 1.0	Mecander	11/09/2015
Second Revision - Content update	Rev. 2.0	Mecander	11/10/2015
Third Revision - Content update	Rev. 3.0	Mecander	06/01/2016
ForthRevision - Content update	Rev. 4.0	Mecander	24/01/2016
FinalRevision - Content update	Rev. 5.0	Mecander	29/01/2016
Sixth - Seventh Revision - Content update	Rev. 7.0	Mecander	01/02/2016
Eighth Revision - Content update	Rev. 8.0	WeGO	02/02/2016
Ninth Revision - Content update	Rev. 9.0	Mecander	22/02/2016
Tenth Revision - Content update	Rev. 10.0	Mecander	23/03/2016
Final Revision	Final	WeGO	29/03/2016

# **1 INTRODUCTION**

## **1.1 Background**

As an endeavor to advance the development of e-Government environment, the World e-Governments Organization (WeGO) conducted a Feasibility Study (F/S) Project for its member San Fernando, Philippines by examining its current e-Government status and providing technical support to boost its e-Government level.

This F/S report aims to review the general structure of e-Government in San Fernando and to offer a constructive consultancy that will enhance the efficiency of its public service delivery. With the analysis based on the CITY e-GOVERNMENT DIAGNOSTIC and SOLUTION (CeDS) online platform, this report recommends e-services and guidelines for an advanced e-Government implementation in San Fernando (the details will be followed in the contents). In particular, a Civic Participation System (CPS) is suggested to San Fernando to upgrade its communication channel and work progress with citizens and businesses.

With the leadership of San Fernando city government, stake-holders, citizens, and enterprises can create strong city government policies and achieve technical development through the utilization of e-Government systems such as the CPS.

## **1.2 Objectives – Purpose of CPS**

The objective of this project is to establish a digital, two-way communication channel for the government and the citizens in San Fernando, by leveraging relevant ICT technologies, to advance transparency, efficiency and accountability in the city's public administration. Whereas public service has been delivered one-way from the government to the citizens, it is now crucial to set up a communication channel that will promote interactive discussions among all stakeholders in the city to solve a mixture of diverse urban problems derived from rapid urbanization. The project therefore also aims to accelerate citizens' engagement and collaboration in the city management, by encouraging citizens to actively inform their needs to the government, ask for the government's support, and express their thoughts while the government meets the citizens' needs in an efficient way. Such process will enable the government to better collect the citizens' opinions and data on the city which will result in greater transparency and improvement of city services based on efficient administration.

This communication process can be facilitated by the development of a digital government system like the Civic Participation System (CPS). Launching of the CPS can be the stepping stone to establish an Open Government Management System and is expected to be a trigger point for the development of San Fernando's e-Government

maturity level.

### **1.3 Project Scope and Methodology**

With the institution of the iSan Fernando:WeServe Initiative under the Philippine e-Government Master Plan(eGMP) 2013 – 2016, San Fernando is endeavoring to ensure citizen engagement with open government and desires to establish a strong communication channel between the government and citizens. For this purpose, the CPS is recommended and in order to come up with accurate findings and an effective CPS during the Project, it is important to first understand the current status of San Fernando's e-Government environment. Therefore, the WeGO consultant team initially conducted on-site surveys for in-depth investigation of the city and also assisted San Fernando to utilize the CeDS Online Platform which produced a scientific analysis on the city's maturity level of e-Government. This F/S Report, therefore, includes not only an analysis on San Fernando's e-Government environment, but also recommendations of e-Government services to be established for the ICT development in San Fernando, including the CPS.

The main components of the entire F/S Project are as follows;

- (i) Investigation and production of this F/S report for San Fernando,
- (ii) Development and delivery of a customized demo-version of the actual CPS to San Fernando city government for its effective communication with citizens and,
- (iii) Operation of a capacity building and training program on the CPS to San Fernando officials.

## 2 ANALYSIS & DIAGNOSIS

### 2.1 General City Profile



The **City of San Fernando** is a third-class component city and capital of the province of La Union in the Philippines. Situated at the center of the Ilocos Region, San Fernando City is the region's Regional Capital. It is located about 270 km north of Metro Manila. Considered as the Gateway to the North, San Fernando City is about 136 kilometers away from the Spanish-influenced tourist attractions in Vigan City, Ilocos Sur, about 221 kilometers away from the white sand beaches of Pagudpud, Ilocos Norte, and only 60 kilometers away from Baguio City, the Summer Capital of the Philippines. San Fernando City, with a total land area of 102.7 sq. km., is bounded on the south by the Municipality of Bauang, La Union, on the east by the Municipalities of Bagulin and Naguilian, La Union, on the north by the Municipality of San Juan, La Union, and on the west by the South China Sea.

San Fernando City, with 59 subdivisions, used to be one of the 20 municipalities of the Province of La Union until it was converted into a component city of La Union in March 1998. The city is a third-class component city and capital of the province of La Union in the Philippines. According to the 2010 Philippine census, it has a population of 114,963 people. San Fernando was founded in 1786 and was named after Saint Ferdinand III of

Castile. It is the financial, industrial and political center of the province and became a city by virtue of R.A. 8509 signed into law on February 13, 1998 and ratified on March 20, 1998 by a plebiscite.

The 1987 Constitution declared Filipino as the national language of the country. Filipino is an official language of education and also the major language of the broadcast media and cinema, but less important than English, another official language, as a language of publication.

For industry of San Fernando, agriculture remains as the main source of livelihood of the city's population. Rice, corn, legumes, leafy vegetables, fruits and tobacco are among the major crops of the city. Those living along the coastline/seashore are also engaged in fishing. As the Ilocos Region's Regional Capital, many of the regional offices of government and private institutions are located in the city. It is also the center of trade, commerce, financial, educational and medical institutions.

## **2.2 Analysis on San Fernando's e-Government Environment based on On-Site Investigation**

San Fernando has a clear strategy and plan in developing its e-Government such as carrying on the "ICT For Seniors" program as part of the Ministry of Science and Technology's thrusts to ensure that all citizens are provided with greater access to, and equipped with the capability to utilize, information and communication technology (ICT) to improve their quality of life.

Also, San Fernando City envisions its city government website to be "the humble beginnings of exciting changes", serving as an interactive portal to disseminate current information, conduct interesting forums, and polls, support open interaction and eventually structure an exclusive membership club with various privileges that can tap into more profound public services by interactive media, such as classified ads, advertisements and free general information.

Despite the promising city government portal and its e-Government development strategies, San Fernando has no separate website or a civic participation system for complaints management. Therefore, complaints from citizens are collected and processed through paper documents. All the received complaints and issues concerning

departments of the city are aggregated every Monday morning and processed manually. Most of the public services are directly performed by the city government. But complaints on electricity and water supply management, which are not directly serviced by the city, must be mailed to the outsourcing company to be processed.

The absence of a civic participation system discourages the citizens from making requests and receiving immediate responses from the San Fernando government on their needs. The government in turn has very limited information on the citizens' demands and therefore may not be able to make the best decisions to satisfy the citizens.

According to these on-site investigations, it was discovered that the San Fernando city government requires a smart, digital system that can support the easy collection of citizens' complaints and opinions, management of such complaints as well as comprehensive analysis of complaint-related data to detect the citizens' needs in the city.

# Welcome to CeDS!

City e-Government Diagnostic and Solution Online Platform

[Learn more](#)



## **2.3 Analysis on San Fernando's e-Government Environment based on the CeDS investigation**

The CeDS Online Platform is an online CITY e-GOVERNMENT DIAGNOSTIC and SOLUTION toolkit which is offered to WeGO members to help them self-assess their status of e-Government maturity without the consultation of outside experts. In addition to the on-site investigations, San Fernando's e-Government environment was observed and analyzed with the investigation of the leading-edge CeDS Online Platform. The CeDS Investigation consists of two investigation sheets which are the "Investigation of e-Government Maturity" and "Investigation of Current e-Government Systems." Based on these investigation sheets, diagnostic reports were generated that includes overall scores, scores by dimensions and what to do as the next step.

### **2.3.1 Investigation of e-Government Maturity**

In this section, the maturity levels of internal and external dimension of San Fernando's e-Government environment were evaluated. For the internal aspect, San Fernando's governance mechanism, policy & institution and resource capacity were examined to determine the city's ability to deploy new processes and technologies. On the other hand for the external dimension of San Fernando's e-Government environment, ICT network, citizen readiness and public service infrastructure were investigated to understand the e-Government context in which San Fernando operates.

### **2.3.2 Investigation of Current e-Government Systems**

The CeDS also investigated the e-Government systems and processes that are currently in operation or utilized by San Fernando in four specific areas which are e-Admin, e-Industry, e-Life and e-Infra. Investigation of the existence and development/deployment status of the current e-Government systems in these areas reflected the maturity level of e-Government of San Fernando.

Based on these investigations, the CeDS generated the following three Diagnostic Reports:

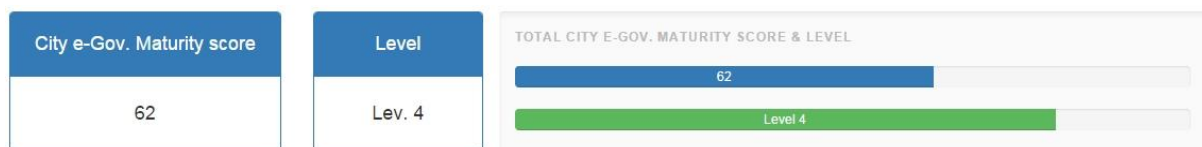
- (i) Diagnostic Report I - Overall e-Government Maturity which provides one overall score and level for the maturity of San Fernando's e-Government environment,
- (ii) Diagnostic Report II - Specific e-Government Maturity by Internal/External Dimensions which indicates the maturity levels and scores for each of the six dimensions as well as detailed descriptions of each dimension according to the maturity level and,
- (iii) Diagnostic Report III - Current e-Government Systems Maturity and Progressive Systems Map that demonstrates a comprehensive picture of which systems need to be implemented for San Fernando to move up to the next maturity level.

## 2.4. Outcomes from CeDS diagnosis

### 2.4.1. Diagnostic Report I. Overall e-Government Maturity

According to the CeDS assessment, San Fernando was diagnosed with level 4 for the overall e-Government Maturity which is quite high, considering the range from levels 1 to 5. The city has enough infra-structure and has a general understanding on the basic concepts of e-Government. However, the city needs to be more effective in its communication with the citizens. Citizens recognize the importance to participate and provide feedbacks to the government, but lack of effective communication channels and not enough promotion deters San Fernando from stepping up as a leader in e-Government and obtaining the highest maturity level 5.

#### i) Overall e-Government Maturity



#### ii) Components of Overall e-Government Maturity Levels and Your City's Position

Level	Description	Internal Forces within City Government	External Forces outside City Government
1	Infancy	City government lacks the leadership, organization, and work processes to develop a vision or plan for city e-Government, which results in low to zero citizen trust and confidence in government. Cities also do not have policies or ordinances necessary to facilitate e-Government, including security and privacy policies. Government systems are opaque, and suffer from low resources including financing, technology, and	ICT infrastructure is limited or nonexistent. As a result, e-Government capabilities are severely challenged. Citizens are unaware of e-Government and of the potential of ICT to facilitate better governance. Basic physical infrastructure (e.g. roads, bridges, water, electricity, buildings) is severely under-developed.

		human capital.	
2	Evolving	City government has a vision for e-Government, but due to limited leadership and organizational capacity, there is inadequate action or setting of goals. Yet, cities have enacted some policies or ordinances to facilitate basic e-Government services and transactions. However, these policies may be inadequate or irrelevant given the circumstances. Moreover, the city government has limited funding, equipment, and trained functionaries, restricting its ability to execute e-Government beyond computerization.	ICT infrastructure is under development but has a minimal impact on accessibility and affordability -- it is insufficient to realize e-Government. Some citizens are aware of e-Government, but they lack access to services due to limited resources and scarce opportunities to gain ICT literacy and skills. Where it exists, the infrastructure is limited in scale, inconsistent, undeveloped, and unreliable.
3	Implementing	City government has the vision and organizational structure to make decisions and to achieve set goals. Furthermore, they have adequate financing, hardware and software tools, and trained functionaries to enable delivery of basic services through e-Government systems. Because the necessary privacy, digital document recognition, and security policies are in place, e-Government has progressed beyond	ICT infrastructure is developed to reduce barriers to accessibility and affordability, and ICT is sufficiently consistent to support basic e-Government delivery and service. Most citizens are aware of e-Government services due to increased digital literacy, but access to full e-Government services remains a challenge. Basic physical infrastructure has been constructed and reaches most citizens; however, it is inadequate to meet the

		digitalization. City agencies have websites where citizens can access information, communicate with agencies, and conduct transactions. However, internal business processes remain limited, and interoperability between government agencies is insufficient to facilitate a one-stop-shop for government services through a city web portal. There is evidence of the beginning stages of simple integration or two-way communication.	full requirements of the population.
<b>&lt;San Fernando&gt; 4</b>	Interacting	City government has the leadership structure in place, the means, and technology: computers, servers, networking of systems, and trained staff to deliver interoperable services across various government functions. Due to the implementation of service oriented architecture (SOA), city services are now accessible directly for most business processes via an online user interface. The organization has moved beyond simple integration, or two way communication, and has become cross functional.	Relatively advanced ICT infrastructure is in place, such as a broadband backbone and mobile towers. ICT, such as the internet and mobile phones, are accessible, affordable, and consistent. Though citizens can access e-Government, there are limitations to real-time communications with city government. Citizens can easily access and are capable of using e-Government services in their daily lives. Basic physical infrastructure is in place and meets the needs of most citizens; however, it still suffers from periodic inconsistencies.

		<p>The organization is moving toward paperless administration. Internal business processes are rationalized and more transparent, though not perfectly so. Relevant policies and design standards are in place and there is an e-Government master plan. Half of the city e-Government domains now interact freely and in a federated manner.</p>	
5	Converging	<p>City government has the leadership capacity to articulate its vision and engender citizen consensus, and adequate organizational structure for decision making and prioritizing goals. Integration of government services is complete, enabling interoperability amongst various agencies. Internal business processes are streamlined and efficient, due to full implementation of ICT-enabled systems. The regulatory and legal framework promotes government transparency and protects citizen privacy and security online, enabling full execution of a master plan for e-Government. At the same time, the framework</p>	<p>ICT infrastructure is advanced, consistent, and ubiquitous, enabling citizens to access e-Government services cheaply and in real time. Citizens can engage in prompt communications with city government, often by utilizing mobile technology. Citizens also have the capacity and know-how to fully utilize the benefits of e-Government to access services and to engage in politics and policymaking. Citizens, furthermore, expect more transparent and participatory processes and for their government to respond to innovations and means of enhancing service delivery and efficiency. Basic physical infrastructure is</p>

		is also conducive to greater innovation and adaptation to shifts in technology and citizen demands. In short, the city government is running at excess capacity, with advanced resources and human capital to overcome challenges and move towards the creation of an intelligent and ubiquitous city.	advanced, developed, and fully meets the demand for an intelligent and ubiquitous city.
--	--	--	---

### iii) More Details on Your City's Position

D. Level 4- Interacting
<p>Level 4 entails significant process reengineering, broad organizational changes, and fully integrated front- and back-end processes. The citizenry is educated and ICT-literate, and expects e-Government systems to provide enhanced services. Further, the necessary physical infrastructure is in place to supply seamless and integrated government services using the internet. This capability has been described as vertical and horizontal integration of services. Vertical integration of services describes a process of enabling information to flow within the same government agency. For instance, many administrations interact more closely with their counterparts in a central or local office than with administrators in other agencies. Facilitating such communication by providing a central agency database accessible to administrators in any office, for example, can increase agency efficiency. Horizontal integration describes the process of enabling information to cross agency and bureaucratic lines. Horizontal integration streamlines government structures, reduces barriers, enabling citizens and businesses to conduct transactions with multiple agencies in one encounter (e.g. through web-based "one-stop shopping" for government services). The process facilitates a significant change in the user experience as e-Government develops. From the demand perspective, at Level 4, citizens have widely adopted e-Government and have come to expect it to enhance their daily lives. Mobile technology, widespread adoption of broadband, and public wi-fi connectivity enable even greater access to services, including location based services. Citizens regularly use the internet and mobile, and conduct monetary transactions online. The reliability and security of such services engenders trust when transacting with government. In addition, citizens, businesses, and civil society may begin pushing for even more transparency, efficiency, and accountability. These stakeholders will begin to look for ways to facilitate citizen participation in government decision-making using the tools of e-Government.</p>

## 2.4.2. Diagnostic Report II. Specific e-Government Maturity by 6 Internal/ External Dimensions

San Fernando city mostly marked high levels such as 4 and 5, out of the highest level of 5. Services currently provided are somewhat up-to-date however, they may not meet citizens' level of expectations and certain software upgrades may be needed. Software upgrades should be accompanied by active promotion to maximize usage by citizens.

### i) Maturity Level and Score

Dimensions	Score(Max. 100)	Maturity Level
Overall Internal	83	4
Governance Mechanism	97	5
Policy & Institution	69	4
Resource Capacity	84	3
Overall External	68	4
ICT Network	90	5
Citizen Readiness	62	4
Public service Infrastructure	52	3

### ii) Detailed Description of Maturity Levels of Internal / External Dimensions

#### a. Internal Dimensions within City Government: Overall Internal [Level:4]

Internal Dimensions refer to the attributes of a city government that constitute its ability to supply e-Government services to citizens. This ability relates to the capacity both to plan and to execute e-Government initiatives sustainably. The factors that fall under this category are largely those that a city government has the authority and power to influence.

There are three Internal Dimensions: Governance mechanisms, Policy and Institutions, and Resource Capacity. Of these three, Resource Capacity is the most heavily weighted by this online platform.

Level	Description
1	City government lacks the leadership, organization, and work processes to develop a vision or plan for city e-Government, which results in low to zero citizen trust and confidence in government. Cities also do not have policies or ordinances necessary to facilitate e-Government, including security and privacy policies. Government systems are opaque, and suffer from low resources including financing, technology, and human capital.

2	City government has a vision for e-Government, but due to limited leadership and organizational capacity, there is inadequate action or setting of goals. Yet, cities have enacted some policies or ordinances to facilitate basic e-Government services and transactions. However, these policies may be inadequate or irrelevant given the circumstances. Moreover, the city government has limited funding, equipment, and trained functionaries, restricting its ability to execute e-Government beyond computerization.
3	City government has the vision and organizational structure to make decisions and to achieve set goals. Furthermore, they have adequate financing, hardware and software tools, and trained functionaries to enable delivery of basic services through e-Government systems. Because the necessary privacy, digital document recognition, and security policies are in place, e-Government has progressed beyond digitalization. City agencies have websites where citizens can access information, communicate with agencies, and conduct transactions. However, internal business processes remain limited, and interoperability between government agencies is insufficient to facilitate a one-stop-shop for government services through a city web portal. There is evidence of the beginning stages of simple integration or two-way communication.
<b>&lt;San Fernando&gt; 4</b>	City government has the leadership structure in place, the means, and technology: computers, servers, networking of systems, and trained staff to deliver interoperable services across various government functions. Due to the implementation of service oriented architecture (SOA), city services are now accessible directly for most business processes via an online user interface. The organization has moved beyond simple integration, or two way communication, and has become cross functional. The organization is moving toward paperless administration. Internal business processes are rationalized and more transparent, though not perfectly so. Relevant policies and design standards are in place and there is an e-Government master plan. Half of the city e-Government domains now interact freely and in a federated manner.
5	City government has the leadership capacity to articulate its vision and engender citizen consensus, and adequate organizational structure for decision making and prioritizing goals. Integration of government services is complete, enabling interoperability amongst various agencies. Internal business processes are streamlined and efficient, due to full implementation of ICT-enabled systems. The regulatory and legal framework promotes government transparency and protects citizen privacy and security online, enabling full execution of a master plan for

	e-Government. At the same time, the framework is also conducive to greater innovation and adaptation to shifts in technology and citizen demands. In short, the city government is running at excess capacity, with advanced resources and human capital to overcome challenges and move towards the creation of an intelligent and ubiquitous city.
--	--

#### b. Governance Mechanism [Level:5]

Governance is comprised of leadership that give administrators the authority to cast a vision for e-Government, and structures that provide for a division of roles and responsibilities among administrators implementing e-Government. Where e-Government implementation is the responsibility of a single agency or officer, effective governance might require elevating that agency or officer within the government hierarchy, to ensure sustained importance in government policy making. Governance also includes the organizational work processes that translate vision into effective implementation.

Level	Description
1	City government lacks the leadership, organization, and work processes to develop a vision or plan for city e-Government, which results in absence of confidence from citizens.
2	City government has a vision for e-Government, but the shortcomings of limited leadership and organization have unreliable impact on business processes and setting of goals.
3	City government has the leadership to develop a vision and the organizational structure to make decisions to achieve set goals, but it does not have the desired impact of transforming business processes, and interoperability amongst agencies within the government also remains insufficient.
4	City government has the leadership structure in place, means, and technology: computers, servers, networking of systems, and trained staff to deliver interoperable services across various government functions. Due to the implementation of service oriented architecture (SOA), city services are now accessible directly for most businesses processes via an online user interface. The organization has moved beyond simple integration, or two way communication, and has become cross functional. The organization is moving toward paperless administration. Internal business processes are rationalized and more transparent, though not perfectly so. Relevant policies and design standards are in place and there is an e-Government master plan. Half of the city e-Government domains now interact freely and in a federated manner.
<b>&lt;San</b>	City government has the leadership capacity to articulate its vision and

<b>Fernando&gt; 5</b>	engender citizen consensus, and adequate organizational structure for decision making and prioritizing goals. Integration of government services is complete, enabling interoperability amongst various agencies. Internal business processes are streamlined and efficient, due to full implementation of ICT-enabled systems. The regulatory and legal framework promotes government transparency and protects citizen privacy and security online, enabling full execution of a master plan for e-Government. At the same time, the framework is also conducive to greater innovation and adaptation to shifts in technology and citizen demands. In short, the city government is running at excess capacity, with advanced resources and human capital to overcome challenges and move towards the creation of an intelligent and ubiquitous city.
---------------------------	---

#### c. Policy & Institution [Level:4]

This dimension is comprised of ordinances, regulations, and policies that, together, affect the environment in which e-Government is implemented. The indicators considered under this dimension are those enacted and enforced by cities, rather than regional or national governments. Thus, they largely relate to the existence and execution of a city's e-Government Master Plan, and its effects on citizens accessing city e-Government services. Often, new ordinances and policies are necessitated by the introduction of ICT and ICT-enabled systems (e.g. online security regulations). These regulations and policies create an environment that is either conducive or not conducive to city e-Government implementation.

Level	Description
1	City government has no policies or ordinances in place to cultivate the development and application of e-Government. Transparency and Information Security are not apparent.
2	City government has enacted policies or ordinances necessary to facilitate the most basic of services and transactions, but impact is minimal. Transparency related to interactions or transactions is minimal.
3	City government implements the framework and strategies to allow for various types of transactions or interactions, but many limitations exist. There are security protections in place, and there is some evidence of transparency.
<b>&lt;San Fernando&gt; 4</b>	City government appears to be transparent. Ordinances, policies, and master plans are in place to create substantial impact, but barriers causing limitations still exist.
5	City government has clearly defined, intuitive ordinances and policies on transparency, privacy, and security to create a supportive framework

	to execute a master plan for e-Government. This framework is conducive for greater innovation and changes to foreseeable trends.
--	--

#### d. Resource Capacity [Level:3]

Resource Capacity is the most heavily weighted dimension from the CeDS Online Platform.

Resource Capacity describes the budget, human resources, hardware, and software available to a city government as it implements e-Government. Each of these resources are significant, but perhaps the most critical is human resources. It is important to note that public servants can also resist new systems and processes—particularly when they are untrained or are made to feel redundant. For this reason, resource capacity places importance on training and effective change management.

Level	Description
1	City government is challenged with substantial shortages of various resources for e-Government in terms of budgeting, technology, and human capital.
2	City government has inadequate funding, equipment, and trained functionaries that limit its ability to execute e-Government beyond computerization.
<b>&lt;San Fernando&gt; 3</b>	City government has adequate financing, hard and software tools, along with trained human resources to deliver basic public services through e-Government, but does not go further than digitalization.
4	City government has the means and technology (computers, servers, networking of systems, and knowledgeable staff) to deliver integrated services while utilizing various e-Government systems.
5	City government is running at excess capacity with advanced resources and human capital to overcome challenges; to reap the full benefits of e-Government; and to reach the standards of an intelligent and ubiquitous city.

#### e. External Dimensions Outside of City Government: Overall External [Level:4]

External dimensions describe the forces that exist outside the capacity of the city government. These are typically—but not always—beyond a city government’s ability to control, and affect the demand for e-Government services. External dimensions are macro-environmental, contextual factors that describe citizen capacity or readiness to adopt ICT, and create the parameters within which governments can act, or in simpler terms- how well citizens are ready to utilize e-Government and how well the e-government systems work based on the city’s infrastructure and ICT network.

There are three external Dimensions: ICT Network, Citizen Readiness, and Public

## Services Infrastructure.

Level	Description
1	ICT infrastructure is limited or nonexistent. As a result, e-Government capabilities are severely challenged. Citizens are unaware of e-Government and of the potential of ICT to facilitate better governance. Basic physical infrastructure (e.g. roads, bridges, water, electricity, buildings) is severely under-developed.
2	ICT infrastructure is under development but has a minimal impact on accessibility and affordability -- it is insufficient to realize e-Government. Some citizens are aware of e-Government, but they lack access to services due to limited resources and scarce opportunities to gain ICT literacy and skills. Where it exists, the infrastructure is limited in scale, inconsistent, undeveloped, and unreliable.
3	ICT infrastructure is developed to reduce barriers to accessibility and affordability, and ICT is sufficiently consistent to support basic e-Government delivery and service. Most citizens are aware of e-Government services due to increased digital literacy, but access to full e-Government services remains a challenge. Basic physical infrastructure has been constructed and reaches most citizens; however, it is inadequate to meet the full requirements of the population.
<b>&lt;San Fernando&gt; 4</b>	Relatively advanced ICT infrastructure is in place, such as a broadband backbone and mobile towers. ICT, such as the internet and mobile phones, are accessible, affordable, and consistent. Though citizens can access e-Government, there are limitations to real-time communications with city government. Citizens can easily access and are capable of using e-Government services in their daily lives. Basic physical infrastructure is in place and meets the needs of most citizens; however, it still suffers from periodic inconsistencies.
5	ICT infrastructure is advanced, consistent, and ubiquitous, enabling citizens to access e-Government services cheaply and in real time. Citizens can engage in prompt communications with city government, often by utilizing mobile technology. Citizens also have the capacity and know-how to fully utilize the benefits of e-Government to access services and to engage in politics and policymaking. Citizens, furthermore, expect more transparent and participatory processes and for their government to respond to innovations and means of enhancing service delivery and efficiency. Basic physical infrastructure is advanced, developed, and fully meets the demand for an intelligent and ubiquitous city.

f. ICT Network [Level:5]

This dimension pertains to those resources and infrastructure that are required to provide citizens' access to e-Government services. The ICT network involves both the actual, physical network of wire, wireless technologies, fiber, and data centers, and a national or regional network policy (e.g. a master plan).

Also, City administrators must evaluate the current realities of their ICT network in order to formulate workable e-Government strategies.

Level	Description
1	ICT infrastructure is limited, inaccessible, or unaffordable for citizens due to non-existent or undeveloped infrastructure. e-Government capabilities are severely challenged.
2	ICT infrastructure is under development, which has minimal impact on accessibility and affordability, and is insufficient to support the realization e-Government.
3	ICT infrastructure is developed, which has reduced barriers to accessibility and affordability, and is sufficiently consistent to support basic e-Government delivery and service.
4	Relatively advanced ICT infrastructure is in place, such as a broadband backbone and mobile towers. ICT, such as the internet and mobile phones, are accessible, affordable, and consistent. Though citizens can access e-Government, there are limitations to real-time communications with city government. Citizens can easily access and are capable of using e-Government services in their daily lives. Basic physical infrastructure is in place and meets the needs of most citizens; however, it still suffers from periodic inconsistencies.
<b>&lt;San Fernando&gt; 5</b>	ICT infrastructure is advanced, consistent, and ubiquitous, enabling citizens to access e-Government services cheaply and in real time. Citizens can engage in prompt communications with city government, often by utilizing mobile technology. Citizens also have the capacity and know-how to fully utilize the benefits of e-Government to access services and to engage in politics and policymaking. Citizens, furthermore, expect more transparent and participatory processes and for their government to respond to innovations and means of enhancing service delivery and efficiency. Basic physical infrastructure is advanced, developed, and fully meets the demand for an intelligent and ubiquitous city.

#### g. Citizen Readiness [Level:4]

Citizen Readiness describes the level of citizen's digital literacy, knowledge, and ability to pay for e-Government services. It also pertains to a willingness to absorb and use ICT tools, which can sometimes depend on cultural factors. Unless citizens are ready to utilize e-Government, there will be little demand for e-Government services. Accordingly, a citizenry that cannot utilize e-Government services is also, most likely, unable to utilize ICT for other purposes, such as for commerce. Encouraging Citizen Readiness, thus, has long-term importance for a city's economic competitiveness

Level	Description
1	Citizens are unaware of e-Government and the potential of ICT to facilitate better governance.
2	Some citizens are aware of e-Government, but they lack access to services due to limited resources and inadequate opportunities to gain ICT literacy and skills.
3	Most citizens are aware of e-Government services brought about by increased digital literacy, but access to full e-Government services remains a challenge due to limited resources.
<b>&lt;San Fernando&gt; 4</b>	Citizens can easily access and are capable of using e-Government services in their daily lives.
5	Citizens have the capacity and know-how to fully utilize the benefits of e-Government to enhance the quality of their daily lives, which results in political engagement with the government.

#### h. Public service infrastructure [Level:3]

This dimension pertains to the constructed infrastructure that underlies city services and the extent to which cities must provide services. Examples include water and sewage infrastructure, electricity, and paved roads. Because public service infrastructure is the basis for government service provision, its construction and maintenance usually must be a main concern before e-Government systems can enhance them. Hence, city government must account for that in the prioritization of short-term, immediate projects.

Public service infrastructure is an important measure of the ability of a city government to provide e-Government services. The more extensive and advanced the existing infrastructure, the more opportunities city government has to achieve greater management efficiency, integration of services, and increased participation.

Level	Description
1	Civil Service Infrastructure, such as electricity, water, sanitation, housing, and roads, is undeveloped.
2	Civil Service Infrastructure is underdeveloped, limited in scale, inconsistent, and unreliable.
<b>&lt;San Fernando&gt; 3</b>	Civil Service Infrastructure is developed, but it does not meet the full demand of the population and remains inefficient.
4	Civil Service Infrastructure is developed, and meets the full demand of the population but remains inefficient due to periodic inconsistencies.
5	Civil Service Infrastructure is advanced, developed, and fully meets the demand for an intelligent and ubiquitous city.

### 2.4.3. Diagnostic Report III. Current e-Government Systems Maturity

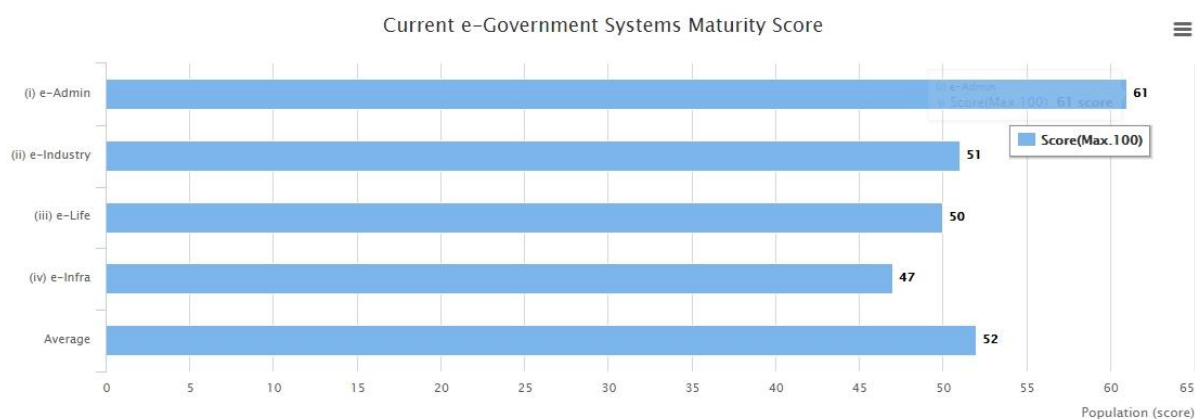
#### a. Current e-Government Systems Maturity

Classification	e-Admin	e-Industry	e-Life	e-Infra	Average
Score (Max. 100)	61	51	50	47	52
Maturity Level	4	3	3	3	3
Total e-Gov Systems	41	9	20	40	110
Systems in Operation	22%	11%	20%	5%	15%
Systems in Development	44%	11%	20%	13%	22%
Systems in Utilization	76%	60%	40%	30%	52%

**Systems in Operation** mean the percentage of your city's currently operational systems, which can include central government systems that are being used by your city.

**Systems in Development** mean the percentage of your city's currently operational systems, which can include central government systems that are being used by your city, as well as systems that are in the plans, in the consulting process of RFP (Request for Proposals), or in development.

**Systems in Utilization** mean the actual utilization rate of your city's currently operational systems, which can include central government systems that are being used by your city.



**b. Components of e-Government Systems Maturity Levels & Your City's Position:e-Admin**

Maturity Level	Components
1	Laying a foundation for administrative informatization and maintenance
	Building foundations for implementing e-Government. Building organizations, personnel, systems, infrastructure environment, and maintaining them. Distributing personal PCs for officials and building the infrastructure, such as communication networks or security equipment for seamless information sharing. Developing and conducting basic IT training programs for all employees and maintaining existing systems and practices, such as internal communication and services procedures relating to civil services for introducing informatization.
2	The creation of administrative information/ introduction
	Building a basic information Database and Database Management System for its application to e-Government services pursuant to the implementation of a basic infrastructure environment (the scope of the Database includes a shift from off-line archives to online archives, as well as newly created e-archives and the introduction of related application programs).
3	The overall development of information systems for administrative informatization and information distribution
	Developing e-Government application programs in individual sectors (departments) for a full-scale internal operation after Level 2. (Information systems relating to basic and critical works have been introduced and users' basic requirements have increased in this level).
<b>&lt;San Fernando&gt;</b> 4	The implementation of e-Government-based administrative business processes
	All officials process their works in an ICT environment in this level.

	Administrative policy-making processes have been upgraded and the efficiency of administrative works has been improved on the basis of advanced infrastructure, such as high-speed communication networks and wired/ wireless complex networks.
5	Administrative information application and convergence with other sectors(agencies, businesses and citizens)
	The diffusion of integrated services, such as two-way communication with other departments, citizens and businesses, and One-Stop administrative services.

c. Components of e-Government Systems Maturity Levels & Your City's Position: e-Industry

Maturity Level	Components
1	Building a foundation for industrial informatization
	Building and maintaining the foundation for the implementation of industrial informatization services and establishing directions for necessary policies.
2	The establishment of strategies and a database for industrial informatization
	Establishing strategies and implementing an early database. Implementing basic level of business support (one-way services).
<b>&lt;San Fernando&gt; 3</b>	The development and implementation for e-Government-based business informatization
	Building general e-Government services (applications) supporting corporate informatization and corporate marketing. Improving production environment and performing trial services.
4	The provision of e-Government-based integrated corporate IT environment
	All services provided or used for e-Government-based business informatization are operated through e-Government systemization.
5	The development of new technology through the advancement of corporate informatization
	The level of both corporate informatization and administrative informatization has matured, which leads to the advancement of e-Government and the development of new technology.

d. Components of e-Government Systems Maturity Levels & Your City's Position: e-Life

Maturity Level	Components
1	Building and maintaining a foundation for e-Life
	Building and maintaining the foundation for life information services. Maintaining the existing environment, systems, and practices, such as the service procedures relating to civil services for introducing e - Government.
2	One-way online services
	Building a homepage and database of existing information for online life information services. This one-way information service provides general information.
<b>&lt;San Fernando&gt; 3</b>	Broadened service scope and the development of services through the diversification of online service provision types and service contents.
	Information generation and distribution kick into high gear internally and the requirements of users increase quickly externally.
4	The advancement of services through personalized services
	1:1 services through the implementation of citizen-centered services. Seamless communication between citizens.
5	Participatory e-Government that reflects citizens' opinions
	Citizens are able to participate in decision-making processes and take the initiative in making policies.

e. Components of e-Government Systems Maturity Levels & Your City's Position: Urban Infrastructure

Maturity Level	Components
1	Establishing directions for city-based services and investigating policies
	Establishing directions and investigating policies for city-based information services.
2	Establishing development strategies for individual city-based service sectors and examining the feasibility of their application.
	Establishing city informatization master plans and executive plans. Maintaining basic infrastructure environment and information database for introducing standard application programs. Reviewing the feasibility thoroughly because the implementation of city e-Government is very costly.
<b>&lt;San Fernando&gt;</b>	Building e-Government services (application programs) in individual sectors.

3	Building early e-Government services (application programs) after establishing a time schedule by sector.
4	The advancement of e-Government services (application programs) in individual sectors.
	Accomplishing mobile and real-time e-Government services for adding value to e-Government.
5	Convergence between city-based service sectors
	Maximizing the added-value through convergence between city-based sectors and between the government and civil sectors.

#### 2.4.4 Progressive Road Map

According to the CeDS diagnosis and the on-site consultancy, it is recommended that the San Fernando city government should consider how to practically implement advanced e-Government services. For instance, each ministry official must consider and determine how to utilize existing data, how to integrate government systems, and how to communicate with citizens using ICT technologies.

To help such considerations, this section recommends a number of e-services (systems) that will contribute to an advanced e-Government implementation in San Fernando. The analysis on San Fernando's e-Government environment has been conducted by practical on-site research and interviews in addition to the CeDS investigation.

As a result of the analysis, the e-service systems list for each sector below provides recommendations on which e-services San Fernando city is suggested to provide. To achieve maximum satisfaction of citizens within limited time and budget, the priority has been set based on a citizen-focused perspective.

The top priority e-services that require San Fernando's greatest attention are systems that will encourage citizen's direct participation in the city problem resolution process (H). Systems which provide information on the environment, such as air pollution, and garbage collection, as well as systems that support making reservations for health institutions follow next (M).

Sector	Name of e-service (system)		Req.*
e-office	1	Collaboration Management System	
	2	Task Management System	
	3	Mobile Office System	
Budget & Accounting system	4	e-Bill System	
	5	Project Management System	
	6	e-Procurement Management System	
e-Admin	7	Legal Affairs System	<b>M</b>
	8	e-Library Management System	<b>L</b>

e-Citizen	9	City Call Center	<b>H</b>
	10	Legal Information System	<b>L</b>
	11	Citizen Education System	<b>L</b>
	13	Medical Online Reservation System	<b>M</b>
	13	Welfare Information System	
	14	Medical Condition Checking System	<b>M</b>
	15	Citizen to Mayor Communication System	<b>H</b>
Clean	16	Rubbish Management System	<b>M</b>
	17	Water Quality System	<b>M</b>
	18	Garbage Truck System	<b>M</b>
	19	Atmosphere Management System	
Risk manage	20	Disaster Prevention System	<b>L</b>

\* Req.: Degree of requirements derived from the Progressive Systems Map of the CeDS Investigation and On-Site Investigation. (H refers to High, M - Medium, and L - Low degree of requirement.)

To promote successful implementation of the advanced e-Government eco-system in San Fernando, the following section of this report names seven e-Government systems to be implemented in an early stage. The three phases represent the level of requirements based on the results of Progressive Systems Map of San Fernando's CeDS Investigation and the Consultants' On-Site Investigation. It was found that the San Fernando city government strongly requires an integrated smart, digital system that can easily collect, manage, and analyze complaint-related data to detect the citizens' needs in the city. Therefore, implementing a Civic Participation System will promote convenient communication between the government and the citizens to ensure effective web/mobile complaint service.

<b>Phase</b>	<b>Req.</b>	<b>Name of e-service (system)*</b>	<b>Correlating Korean e-Government systems**</b>
Phase I.	H	City Call Center	2.4.4.1 CPS: Civic Participation System
	H	Citizen to Mayor Communication System	
Phase II.	M	Legal Affairs System	2.4.4.2 Legal information open library system

	L	Legal Information System	
	M	Medical Online Reservation System	2.4.4.3 Vaccination registration management information system
	M	Medical Condition Checking System	2.4.4.4 Information system of disease management
	M	Rubbish Management System	2.4.4.5 Environmental management system
	M	Water Quality System	
	M	Garbage Truck System	
Phase III.	L	Citizen Education System	2.4.4.6 E-library system
	L	Disaster Prevention System	2.4.4.7 Weather forecast system

\*The systems listed under “Name of e-service (system)” are e-Government systems that are selectively recommended to San Fernando, based on the Consultants’ On-Site Investigation, from a number of systems recommended from the CeDS Investigation.

\*\*The systems listed under “Correlating Korean e-Government systems” are Korean e-Government systems that correlate to the selectively recommended systems above under “Name of e-service (system)”.

#### **2.4.4.1 CPS: Civic Participation System**

Civic Participation System (CPS) encourages direct civil participation in administration, so that limited administrative power can be supplemented. It facilitates the gathering of public opinion for the government’s decision-making process and pursues the provision of citizen-centered services.

Given that a variety of public opinions are produced through diverse information media and social networking services nowadays, the system must be supported by advanced communication technologies as well as comprehensive analytic features to determine meaningful conclusions from the pool of ideas collected from multiple channels.

The CPS recommended in this Project specifically focuses on resolving citizens’

complaints through web and mobile services while the system may be upgraded to support a wide range of other city affairs, such as sending out tax reminders to citizens, informing the citizens on the garbage collection dates, providing reservation service for hospitals and public health offices as well as providing weather information to citizens with timely alerts based on the CPS mobile push service or the CPS website (please refer to section 3.5 on “Service model suggestions for future upgrade” in page 48).

#### **2.4.4.2 Legal information open library system**

This service is to provide information of legislation policy, parliamentary acts and others through an e-library and legal information knowledge system for the bridging of the digital divide with information sharing.

#### **2.4.4.3 Vaccination registration management information system**

Vaccination Registration Management Information System offers optimized vaccination-related processes and enhances the professionalism of medical personnel. Besides, it manages the vaccination records of individuals efficiently and systematically. It pursues a 100% immunization rate, for the protection of public health and citizens from vaccine-preventable disease.

#### **2.4.4.4 Information system of disease management**

The information system of disease management aims to computerize disease control tasks and keep digital records of any outbreak of diseases or epidemics in the city with location information based on a geographic information system (GIS). With the system, the city administration will be able to monitor the cases of infections by districts, and effectively prevent the spread of diseases by performing epidemic sterilizations in areas with high occurrence of diseases. As a result, the government budget for disease management will be dramatically saved with the use of this system.

#### **2.4.4.5 Environmental management system**

The environmental management system entails the construction of an IT infrastructure which will compile a wide range of accurate information related to the environment such as air and water quality by quickly responding to environmental changes and aggregating data. Based on the integrated data, the system provides helpful, unified information on the environment to citizens and the government, thereby supporting the policy-making process and the integration of administrative tasks related to the environment.

#### **2.4.4.6 E-library system**

The e-library system has the purpose of reducing the information gap by sharing materials through the electronic library. Reviews and information on recommended books as well as materials published by individuals or non-profit organizations are updated in the system for the citizens' view.

#### **2.4.4.7 Weather forecast system**

The weather forecast system is used to predict the weather and analyze the potential damages caused by inclement weather conditions or natural disasters. The system will greatly help the city administration to be prepared in advance of natural hazards which will contribute to the successful protection of citizens and prevention of severe economic loss.

### **3 RECOMMENDED SOLUTION FOR SAN FERNANDO**

#### **3.1 Applicable ICT based city solution, CPS**

Among the e-Government systems suggested by the Progressive Road Map, a Civic Participation System (CPS), with specialized functions for collecting, managing and analyzing citizens' complaints, is recommended for San Fernando upon a comprehensive analysis of on-site and CeDS investigations held throughout the consultancy from July to December 2015. The proposed CPS is a system that citizens can easily utilize via web, mobile, and telephone to share their requests/complaints and participate in the government's decision-making process. Supported with strong analysis features, CPS visualizes the submitted complaints and location-based problems which help government officials to swiftly respond and solve the greatest demands of the citizens.

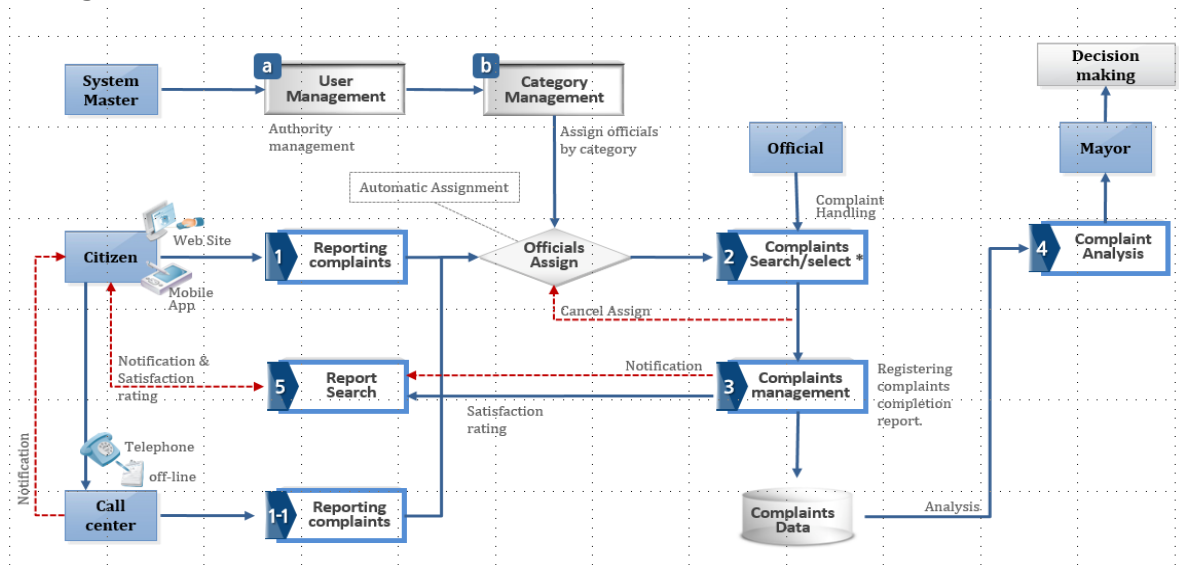
Services of CPS include (i) Complaints Reporting for citizens, (ii) Complaints Handling for officials, (iii) Call Center, (iv) Dash board for management-level officials, including the Mayor, and (v) Management for the administrator of the System. With CPS, citizens can report and share claims through various communication methods at any moment for the resolution of any inconvenience. Once citizens report their complaints through their android smartphones or the website, officials can handle them effectively to provide appropriate services to the citizens. After citizens make their voices heard and officials respond, decision makers can view the status of complaint cases easily with the Dash board Service. CPS also supports officials to take the citizens' complaints through phone calls with its call center function. As call center officials, they can assign complaints to appropriate officials and department, store complaints data as well as histories of each citizen's comments and retrieve the data any time they wish.

The system also is map-based thus can visualize the location of complaints, and supports analysis of complaints from cloud computing for prompt management in the event there is any error or requires maintenance at an emergency.

Besides, the system has been built from a responsive web system, and adjusts its screen to the interface of the device (web or mobile phone) for the citizens' convenience.

### 3.1.1 CPS Flow Chart

This flow chart below displays the general work progress of CPS from its support to the citizens on newly reporting complaints via various means, to the officials on managing the complaints and finally to the Mayor on making decisions on city management.

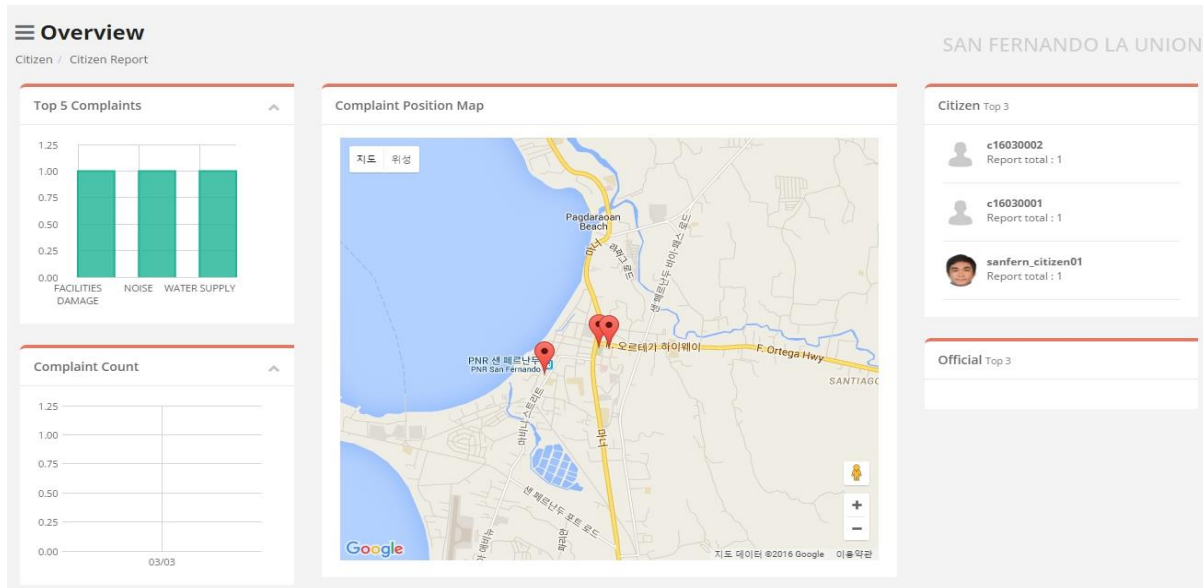


### 3.1.2 Providing services

#### 3.1.2.1 Citizen Service

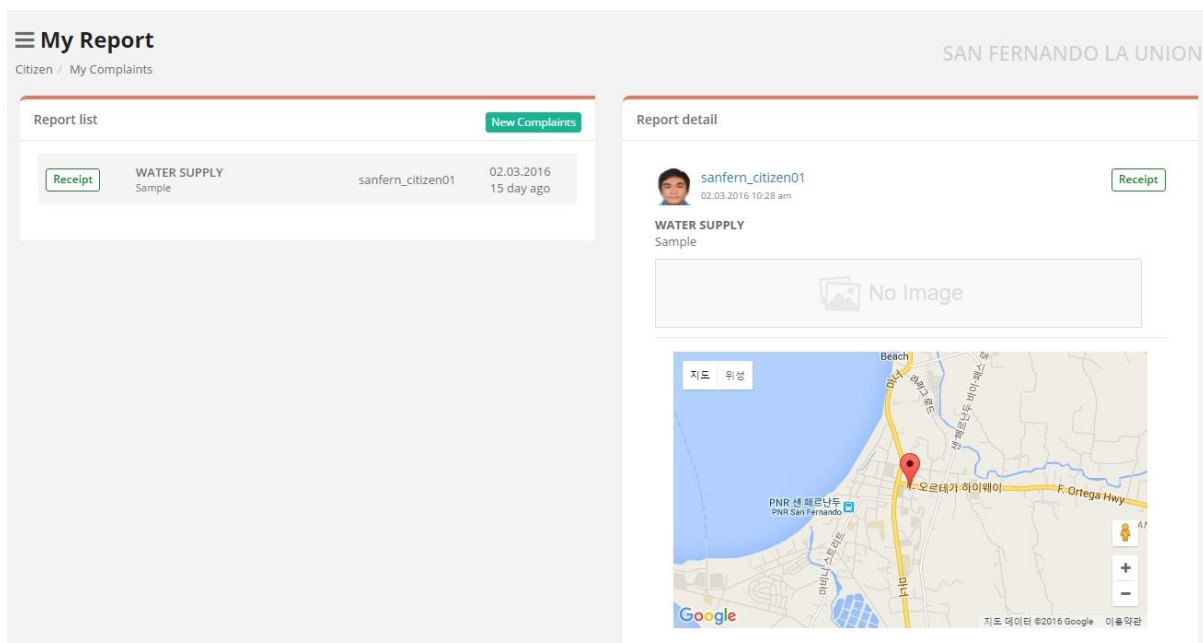
##### a. Reporting Service: Citizen Report

To provide complaints with pictures, locations, progress with map based technology. Citizens can input details of complaints with pictures and the location of their complaint based on the Google map. For android smart phone users, they can simply turn on the GPS and the CPS app will automatically detect where the citizen is reporting a complaint.



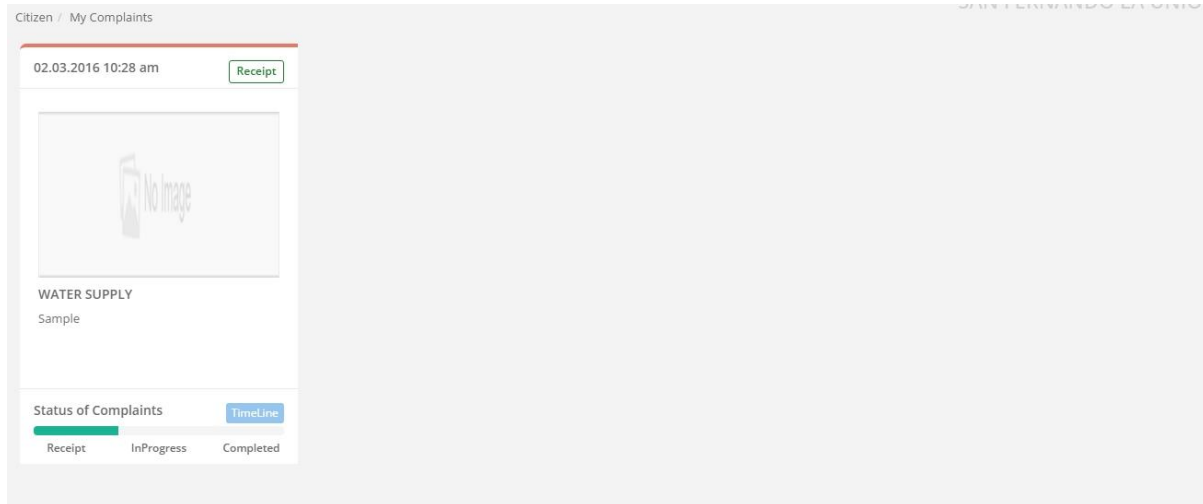
## b. Reporting Service: My Report

This screen provides a history of the registered complaints of the logged in user including the management status of each complaint. Users can see complaints in a list and check if they've filed a similar complaint in the past before reporting a new one.



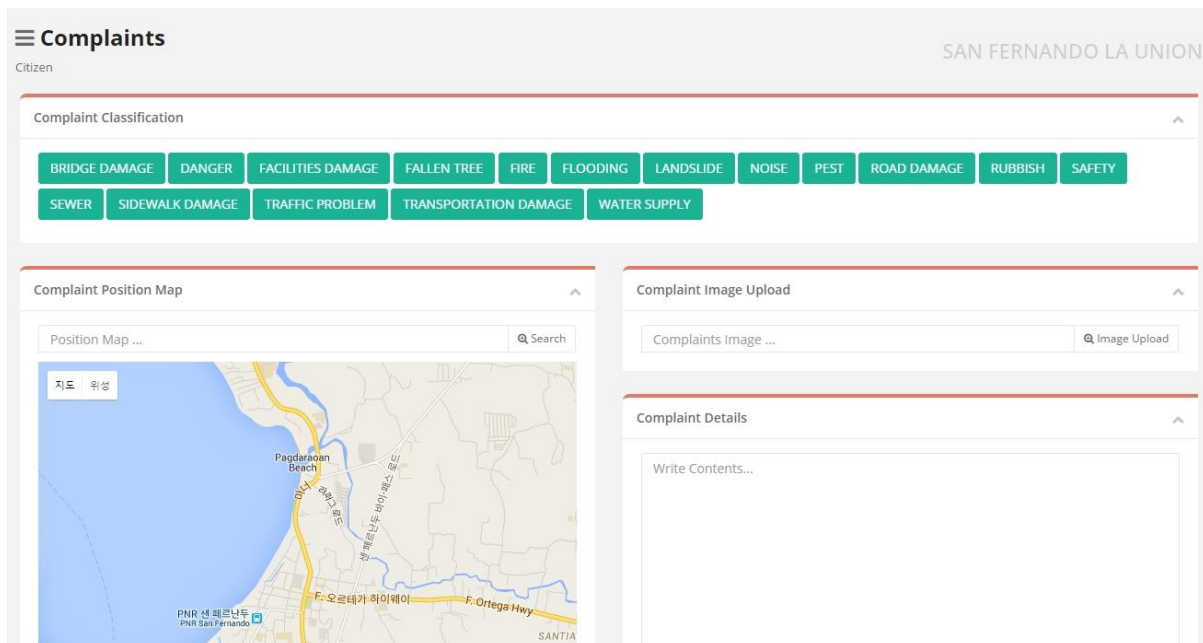
### c. Reporting Service: My Charter

A thumbnail style with pictures of each complaint of the logged in user is displayed for easier recognition of the complaints and the management status is also visualized under each complaint.



### d. Reporting Service: Complaints

Citizens can choose categories when they report new complaints with pictures and location information. They can turn on the GPS function with android smart phone or input its address manually.



### 3.1.2.2 Official Service

#### a. Complaint Handling Service: Report List

In the Report List, officials can check citizens' complaints real-time and designate the complaint that they will be in charge of managing.

**Report List**  
Official / Complaints Handling

**sanfern\_official01**  
Name: sanfern\_official01  
Phone: 00-000-0000  
Email: op1@op1.com

**Receipt 1** **InProgress 1** **Completed 1**

**My To-Do List**

Complaint	Sanfern	Date
WATER SUPPLY Sample	sanfern_citizen01	02.03.2016 15 day ago

**Citizen Complaints** [Add to My To-Do List](#)

<input type="checkbox"/>	Receipt	NOISE uhini	c16030002	03.03.2016 14 day ago
--------------------------	---------	-------------	-----------	-----------------------

**Complaints Detail**

**sanfern\_citizen01**  
02.03.2016 10:28 am

**WATER SUPPLY**  
Sample

No Image

#### b. Complaint Handling Service: To-Do Work List

“To-Do Work List” provides the list of complaints that need to be managed by the official who logged into the CPS. By clicking on each complaint, the official is able to view the image, location and the complaint information that the citizen posted and leave feedbacks for the citizens. By leaving feedbacks from this service, officials can communicate and share results of work with the citizens.

**To-Do Work List**  
Official / Complaints Handling

**My To-Do List & Work History** [Print](#)

Choose a Status  [Search](#)

<input type="checkbox"/>	Completed	FACILITIES DAMAGE Sample	c16030001	02.03.2016 15 day ago
<input checked="" type="checkbox"/>	InProgress	WATER SUPPLY Sample	sanfern_citizen01	02.03.2016 15 day ago

**Complaint Details**

**sanfern\_citizen01**  
02.03.2016 10:28 am

[Answer](#) [LongTerm](#) [Cancel](#) [InProgress](#)

**WATER SUPPLY**  
Sample

No Image

지도 위성

Beach

PNR 샌 페르난도  
PNR San Fernando

오르테가 하이웨이  
F. Ortega Hwy

지도 데이터 ©2016 Google

### c. Complaint Handling Service: Complaints Search

Registered complaints can be looked up by complaints category, satisfaction level, and time period, and the official can view the management status of each complaint. This service function can also be used for further analysis even a few years later since the complaints data are stored securely in the cloud computing system server.

**Complaints Search**  
Official

**Complaints List**

Choose a Status ▾ Choose a Catego ▾ Search Report by name Search

Status	Category	Sample	ID	Date	Time
Completed	FACILITIES DAMAGE	Sample	c16030001	02.03.2016	15 day ago
InProgress	WATER SUPPLY	Sample	sanfern_citizen01	02.03.2016	15 day ago

**Complaints Detail**

sanfern\_citizen01  
02.03.2016 10:28 am InProgress

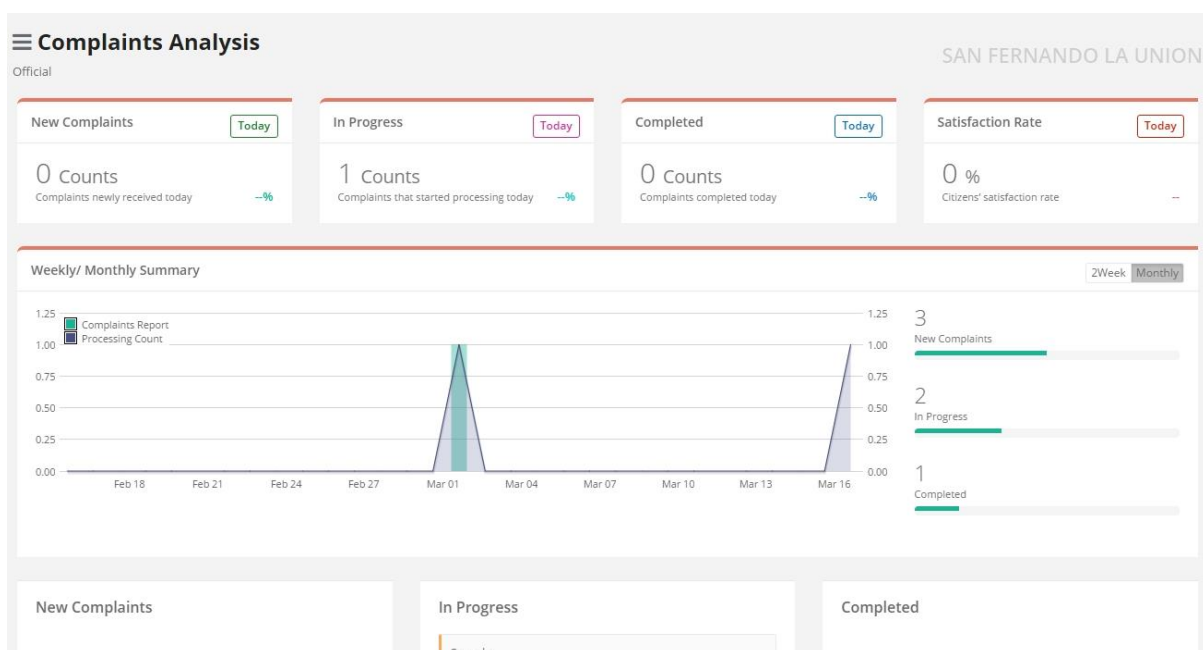
**WATER SUPPLY**  
Sample

No Image

Map showing location: Beach, PNR San Fernando, F. Ortega Hwy, and other landmarks.

### d. Complaint Handling Service: Complaints Analysis

“Complaints analysis” provides daily, bi-weekly and monthly analysis of received complaints. The daily analysis demonstrates a detailed status of how many complaints have been received, are being processed by the government officials and are completed in the given day while the bi-weekly and monthly analyses show a general trend.



### 3.1.2.3 Call Center Service

#### a. Call Center Service : Complaints Report

Citizens who are not capable of using the internet or android smartphone can report complaints via a phone call. An official assigned to the Call Center operator who receives phone calls from citizens will register the complaints through the Call Center Service, instead of citizens themselves, and all complaints will be stored as a database in the cloud computing server.

**Complaints Report**  
Call Center

**Complaint Position Map**

지도 위성

03.03.2016 03:38 PM NOISE unini c16030002 Receipt

02.03.2016 10:34 AM FACILITIES DAMAGE Sample c16030001 Completed

02.03.2016 10:28 AM WATER SUPPLY Sample sanfern\_citizen01 InProgress

**Citizen Information** [Join us](#)

Citizen Information In Search

**Citizen Details**

Name :  
Phone :

**Complaint Registration**

User ID  
User ID

**SAN FERNANDO LA UNION**

**New Complaints6** [Today](#)

0 Counts  
Complaints newly received today --%

**In Progress** [Today](#)

0 Counts  
Complaints that started processing today --%

**Completed** [Today](#)

0 Counts  
Complaints completed today --

#### b. Call Center Service : Complaints Search

With a call center account, officials can search registered complaints by their category, time, and etc. Also the officials can view the personal comments that they left while taking the complaints regarding the citizen or the complaint, and refer to those comments as a reference.

Since the receipt of 'false alarms' (fake reporting) is inevitable, a history of stored complaints can help an official find such false complaint.

**Complaints Search**  
Call Center

**Complaint List**

Status [Choose a Status](#) Classification [Choose a Category](#) [Search](#)

03.03.2016 03:38 PM NOISE unini c16030002 Receipt

02.03.2016 10:34 AM FACILITIES DAMAGE Sample c16030001 Completed

02.03.2016 10:28 AM WATER SUPPLY Sample sanfern\_citizen01 InProgress

**Complaint Details**

[sanfern\\_citizen01](#)  
02.03.2016 10:28 am [InProgress](#)

**WATER SUPPLY**  
Sample

No Image

지도 위성

03.03.2016 03:38 PM NOISE unini c16030002 Receipt

02.03.2016 10:34 AM FACILITIES DAMAGE Sample c16030001 Completed

02.03.2016 10:28 AM WATER SUPPLY Sample sanfern\_citizen01 InProgress

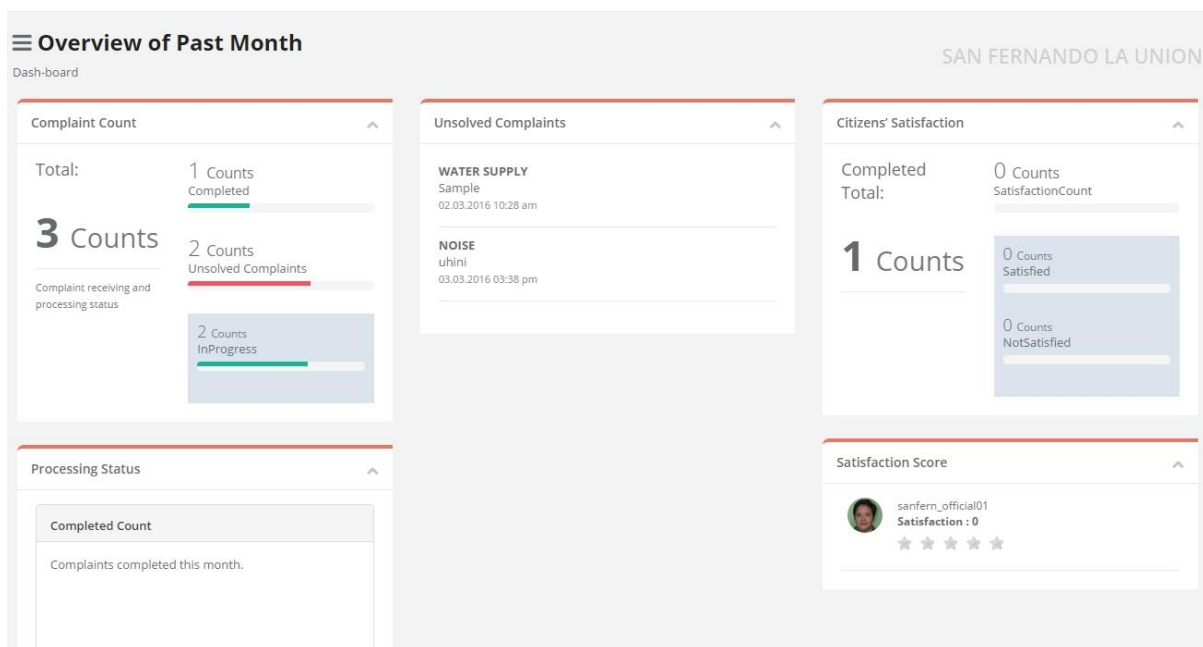
### 3.1.2.4 Dash-board (Mayor) Service

#### a. Mayor Service: Dash Board Service Overview

Since management-level officials have very limited time to make decisions related to the city, citizen complaints that are analyzed on the Dash-board can help them make effective decisions.

From this service, upper level management officials can easily identify the total number of complaints. Unsolved complaints can also be shown in a rolling basis so that none of complaints get lost.

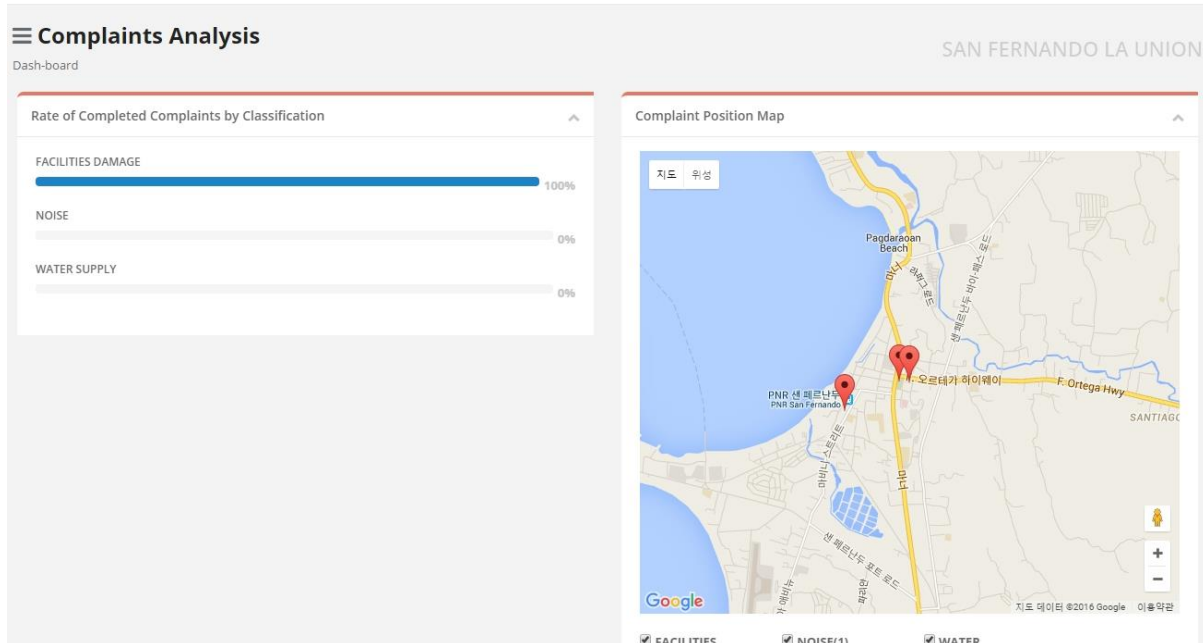
The senior officials can also refer to the citizens' satisfaction rate to view whether the citizens are satisfied with the government's services in the Dash-board.



#### b. Mayor Service: Complaints Analysis Dash Board

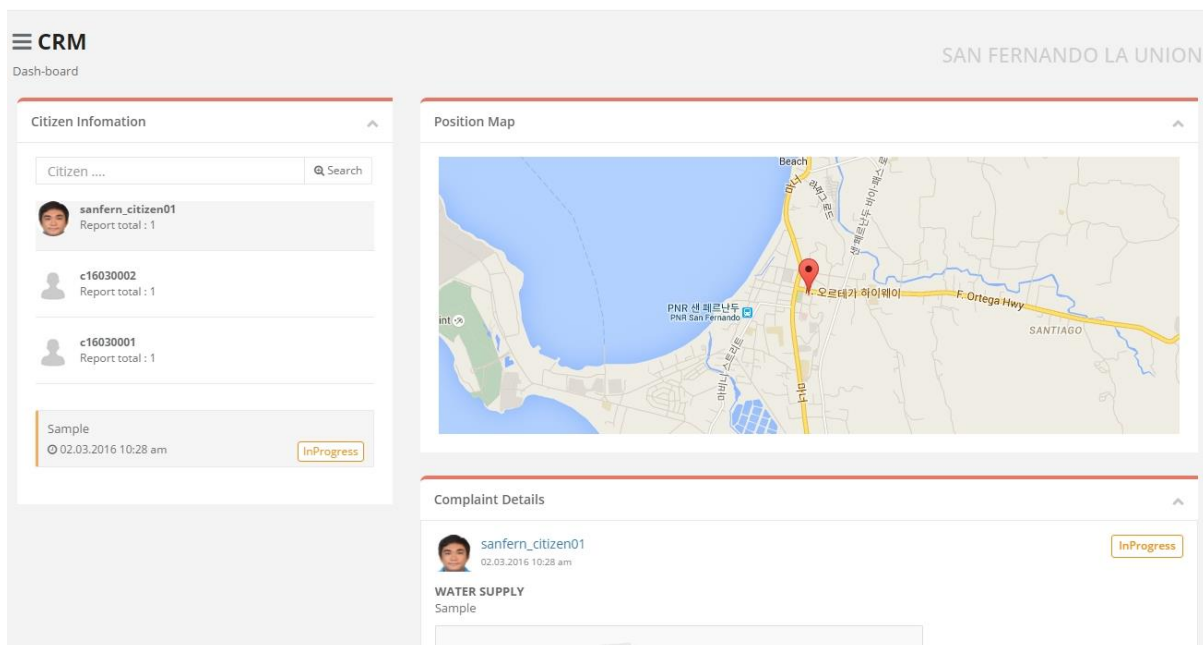
“Complaints analysis dash board” provides citizens' complaints by classification to figure out the greatest needs or complaints in the city. For example, if there is more reporting on fire than any other issues in the city, this shows that the city should pay more attention to fire.

From this dashboard, locations of complaints are provided as well for the city leader to see the geographical distribution of the complaints for better management and prevention of similar problems in the city.



### c. Mayor Service: CRM Dash Board

“CRM dash board” allows the management-level staff to check the dialogue and communication between citizens and officials.



### 3.1.2.5 Management Service (Administrator)

#### a. Management Service: User Management

The Administrator can use the “User management” function to control and manage all users’ (citizens and official) information and designate which officials will be in charge of which categories.

≡

User Management

Admin

SAN FERNANDO LA UNION

User Management

Select

Select

Detail Terms

Search

User Add

No	ID	Name	E-mail	Phone Number	Join Date	Authority
18	c16030002	name	email@email.com	1234	Mar 03 16	U
17	c16030001	Test	Test123@gmail.com	123	Mar 02 16	U
16	c16010001	Sample	wow@gmail.com	1234567890	Jan 15 16	U
15	c15120001	Earl Burgos	earlburos@gmail.com	8874040	Dec 17 15	U
14	k_kacey	Kacey Kim	yejin.kim@mecanderv.com	+821071279212	Dec 08 15	U
13	test1	test1	test1%40cps.com	0101111	Oct 26 15	U
12	test3	11	11	11	Oct 25 15	U
11	testlee	tester lee	tsetesr@testmail.com	010-111-1111	Oct 25 15	U
10	civic8	Willy			Oct 25 15	U
9	civic9	William			Oct 25 15	U
8	sanfern_callcenter02	sanfern_callcenter02	call@gmail.com	000-0000-0000	Oct 23 15	C

#### b. Management Service: Category Management

Since different cities have different needs with respect to complaint categories, the administrator can customize and manage the categories under the “category management” function.

≡

Category Management

Admin

SAN FERNANDO LA UNION

Category

Category Add

BRIDGE DAMAGE (2)

Edit

DANGER (2)

Edit

FACILITIES DAMAGE (2)

Edit

FALLEN TREE (2)

Edit

FIRE (2)

Edit

FLOODING (2)

Edit

LANDSLIDE (2)

Edit

NOISE (2)

Edit

PEST (2)

Edit

Officer Add

ID


sanfern\_official01

Name

sanfern\_official01

Phone Number

00-000-0000



ID


sanfern\_official02

Name

sanfern\_official02

Phone Number

00-000-0000



### c. Management Service: System Management

System management refers to editing the layout of the system, and selecting the language options for the usage of CPS. Without professional technical support, the Administrator can customize a variety of aspects of the CPS functions according to the city's preferences. As English is one of the main languages used in San Fernando, there does not appear to be a need to add another language in the CPS. However, if the city requests, a second language can be added in the CPS as illustrated below.

**System Management**  
Admin

**System Setting**

System Name: WeServe: Open Government Management System

City Name: SAN FERNANDO LA UNION

Latitude/Longitude: 16.6167 120.317

Map: A map showing the location of San Fernando, including landmarks like Paqdaragan Beach, PNR San Fernando, and F. Ortega Hwy.

**CITIZEN PARTICIPATION SYSTEM**  
Citizen Report My Complaints Complaints

hanoi\_citizen01 | Edit Profile English Log out

**Complaints**  
Citizen

Complaints Classification

- BRIDGE DAMAGE
- DANGER
- FACILITIES DAMAGE
- FALLEN TREE
- FIRE
- FLOODING
- LANDSLIDE
- NOISE
- PEST
- ROAD DAMAGE
- RUBBISH
- SAFETY
- SEWER
- SIDEWALK DAMAGE
- TRAFFIC PROBLEM
- TRANSPORTATION DAMAGE
- WATER SUPPLY

### Addition /Change of Language in the CPS

**CITIZEN PARTICIPATION SYSTEM**  
báo cáo công dân Khiếu nại của tôi Khiếu nại

hanoi\_citizen01 | Edit Profile Tiếng Việt Log out

**Khiếu nại**  
công dân

Complaints Classification

- bắc cầu THIẾT HẠI
- NGUY HIỂM
- TRẠNG BỊ THIẾT HẠI
- cây ngã
- CHÁY
- lũ lụt
- sạt lở đất
- công bố
- đồ vật
- con đường THIẾT HẠI
- RÁC
- AN TOÀN
- Hệ thống thoát nước
- via hè THIẾT HẠI
- lưu lượng dữ liệu VẤN ĐỀ
- VẬN TẢI THIẾT HẠI
- CUNG CẤP NƯỚC

### **3.2 Impact of CPS**

A successful installation of a Civic Participation System can contribute to the advancement of a mature e-Government in San Fernando. This CPS system is in fact, benchmarked from the Smart Complaint Management System of the Seoul Metropolitan Government in the Republic of Korea, which has become one of the most advanced e-Governments in the international e-Government community. In particular, the following are some of the expected outcomes that San Fernando will benefit from, by launching the CPS:

CPS can strengthen communication and interactions between the government and its citizens. With this system, citizens can present their voices without physical and time limitation unlike the past when citizens had to personally make a visit to the office and were only able to submit their opinions or requests to the government during office hours. The CPS will also promote an open communication environment where citizens' ideas and the government's feedbacks are actively exchanged with each other, contributing to building a more transparent city government.

In addition, CPS can maximize the efficiency in processing the complaints and strengthen the administrative capability of San Fernando. All submissions of complaints will be collected and stored through the CPS. San Fernando will be able to make effective decisions on the city management based on the analysis of all data and statistics derived from the CPS.

### 3.3 Major Technical Specifications

Division	Main Technologies
UI	Korean Web Content Accessibility Guidelines 2.0
	Support various web browsers
Main Features	Big-data based multi-dimensional analysis algorithm
	Responsive Web UI to support various devices
	Multi-language for easy access to citizens
Methodology	Development methodology CASE Tool
	Business management methodology support Tool

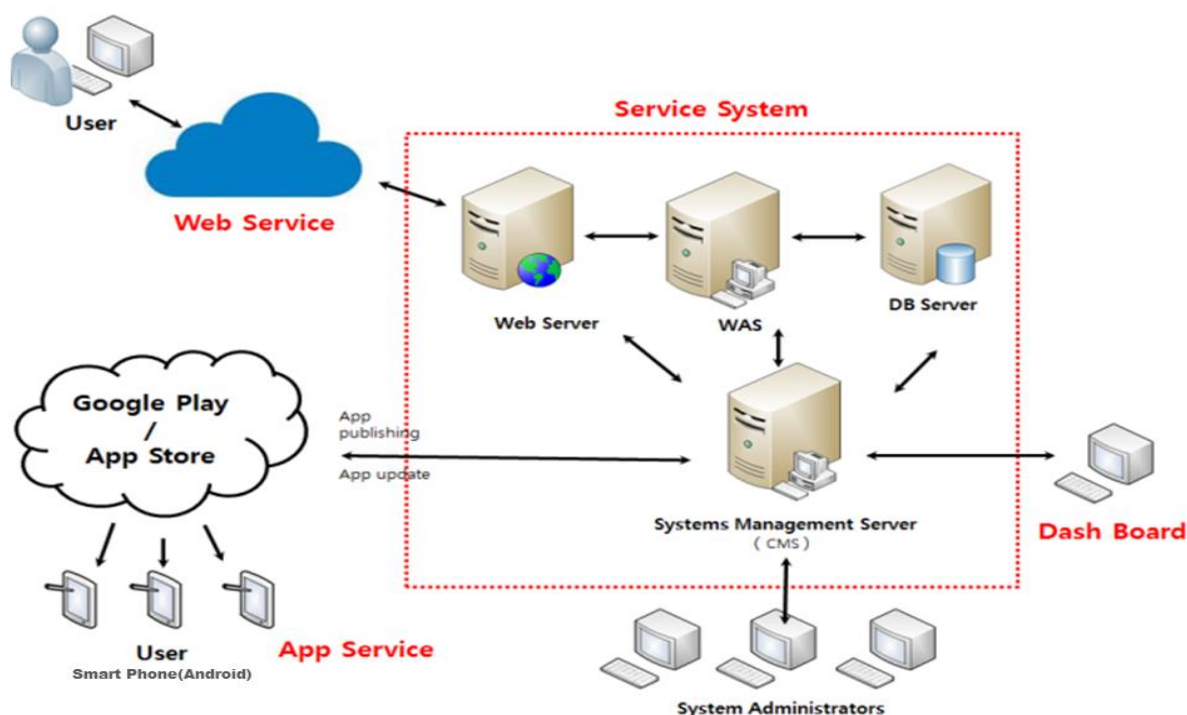
#### 3.3.1. e-Government framework adoption

For effective management and expansion of system operation, components based architecture and re-useable components are used.

Name	Main Technologies
Component based architecture	Components based architecture and pattern
Re-usable components	System based common components
Standardized development guide	Screen, instruction word, program development pattern and system settings.
Common technology	Component categorization and program development pattern model
Featured technology	UI component, application related components and DB access

#### 3.3.2 Cloud

CPS service is provided based on cloud computing. Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources. Therefore cloud computing based services can support various devices with minimal effort as well as extremely low costs as there is no need for separate infrastructure. With recent developed security systems, cloud computing guarantees a safer environment from virus, hacking as well as force majeure.



[Infrastructure configuration ]

### 3.4 Chronological Development Procedure of CPS Project

City informatization system development	CPS design	Design based on experience of Seoul city and local site conditions
	CPS development	System development for smart environment usage Web system development Mobile application development
	CPS Data analysis Tool development	Data Analysis system development
	CPS manual	System manual production
	CPS Commercialization	Immediate system usage with global cloud services
Business vitalization	Knowledge Sharing Workshop	Workshops and training on-site
	CPS Training	
Additional functions	Inspection	The CPS was originally opened and delivered to San Fernando in December 2015 and San Fernando has been invited to inspect and test run the System.

### 3.5 Service model suggestions for future upgrade

The citizen's direct participation in the city problem resolution process, an information system for the weather, air pollution, garbage collection and tax, and a reservation system for health services were suggested as most necessary services and systems for the city. After the expansion of the CPS user base, these required systems can be easily introduced by utilizing the CPS framework.

Department	Service	CPS Upgrade	Description
City Budget/ Accounting office	Tax alarm service	CPS mobile Push service	Remind the citizens of tax relevant information. The information can cover payment due date and general information for taxpayers. This function provides push notifications through smart phone application.
General services office/SWEEP	Garbage collection information service	CPS Web	Provide garbage collection information. The information covers standard method for garbage pickup, garbage collection schedule, recycling information, and etc. The city can reschedule the garbage collection based on citizen complaints information.
City health office	Reservation service for hospital and public health office.	CPS Web	The city can fully utilize CPS framework by providing reservation service for hospital and public health office.
City environment and natural resources	Environment warning service.	CPS mobile push service	By providing weather and pollution(or air quality) information the city can provide timely alerts to the citizens

On a separate note, as the use of CPS can be expanded to numerous different areas with upgrades mentioned above, San Fernando may consider adopting an e-Government Management System. The e-Government Management System can be utilized to monitor and manage all e-Government systems in the city including the upgraded CPS services to prevent any duplicated development of functions among different systems and to

support the efficient operation of the e-Government environment. Once a number of diverse IT systems are launched in the region, this system can play a significant role as the core e-Government system and provide guidance on the future direction of the city's e-Government environment.

### **3.6 Timeline**

#### **3.6.1 Maintenance (Free of Charge)**

It is inevitable for all IT services to have minor errors in the initiation period and therefore, it is mandatory for San Fernando to have a test launching period.

The consultants and technical teams will support maintenance of CPS for San Fernando until July 2016, free of charge.

#### **3.6.2 Recommended Timeline for San Fernando**

To provide stable services to citizens, it is recommendable that San Fernando should first designate a "Test Group" within its government to test the CPS system for one to two months. Any errors and reasonable enhancements should be discussed with WeGO and the technical team in Korea.

After the two month (from February 2016 to March 2016) test period, a system maintenance service for four months will be provided (from April 2016 to July 2016). During this test and maintenance period until July 2016, system operation, system upgrade (based on mutual agreement), and error corrections for system stabilization will be supported without any charges.

#### **3.6.3 System Handover**

Currently the CPS is deployed and operated on a cloud server, but all services including web and database can be transferred to San Fernando upon the city's request. For the service transfer procedure, the city should prepare application and database servers for the CPS and related measures. The cost of transferring all services of CPS to San Fernando will be discussed with WeGO, and is estimated to be approximately 20,000USD.

As an alternative, San Fernando can also use the CPS by continuing to receive remote service from Korea after the complimentary test and maintenance period, upon discussions with WeGO. For such remote service, additional costs will be charged depending on the type of service. The estimated budget for the operational service (server management and monitoring) from Korea is 5,000USD per year. If the support

includes both operational and maintenance service (including minor enhancements) from Korea, the estimated budget is expected to be 9,000USD per year. According to the general practice in South Korea, the operational and maintenance cost has been estimated as 10% of the total development cost of the CPS.

In case San Fernando requests a major process change or functional improvement in the system, additional development costs will be charged based on mutual agreement.

### **3.7 Action Plan (Next steps after this project)**

#### **3.7.1 CPS service operation resources**

##### **3.7.1.1 Call Center operation**

To secure the efficient operation of the Call Center, two to three personnel will be assigned to the Call Center operation.

Main tasks of the Call Center operators are receiving the incoming complaints call and submitting the complaint information in the CPS on behalf of the citizens. The operator can assign the appropriate departments and officials to handle each complaint.

All the citizens can raise the complaints through the call center.

##### **3.7.1.2 CPS Service Management**

A Service Management Official will be assigned as an Administrator to manage the CPS by performing the following tasks.

- a. Complaints category management and registration.
- b. Complaints department management and resource management.
- c. User (Citizen, Officials) authority management.

##### **3.7.1.3 System Management (operation and monitoring)**

A System Management Official (separate from the Service Management Official) will be responsible for communicating with WeGO and the Consultants on any errors found in the CPS, and other system related emergencies.

##### **3.7.1.4 Complaint Management**

With the support of officials in charge of call center operation, CPS service management, and system management, all collected complaints can be handled by each relevant

departments and officials of San Fernando City Government according to the respective complaint areas.

#### **4 CONCLUSION**

When confronted with complex social challenges, the government must acknowledge the significance of collaborating with its citizens as they may not only be the source of information but also the producer of creative ideas. Citizens' involvement in local governance through a smart communication tool such as the CPS can create unique value in producing innovative solutions in the city.

Moreover, there is a great number of ways on how the CPS can be developed in the future to support the city administration for a variety of matters. From the initial narrow focus on collecting and managing the citizens' complaints, services of the CPS can eventually be expanded to providing tax reminders or garbage collection notifications to the citizens, to conducting voting among citizens on a particular issue and/or to alerting citizens of the air pollution status based on the monitoring of air quality.

Civic engagement can play an essential role in bringing citizen-centric social innovation through participatory and transparent governance. The CPS can serve as a critical, open communication tool for San Fernando to initiate its citizens' participation in the city's decision-making process which will not only increase citizens' trust in the government and strengthen democratic governance, but also enhance innovation in the city through citizens' ideas and improve the quality of citizens' lives.

# **Civic Participation System Process Manual**





### Map Based Service

Sharing location service for civil claims based on Google Map

### Civic Participation System

- + Web
- + Mobile
- + Telephone
- + Analysis

### Analysis Service

Uses various tools and method to analyze citizen complaints.

### Infra

Cloud servers to be used that does not have geographical limitation



## Reporting Service

Reporting and Sharing claims from citizens via various methods.

## Complaint Handling Service

Real-time resolving any inconvenience in living for citizens and effective management service.

## Dash Board Service

Supporting city management by analyzing citizen claims.

## Call Center Service

Call center for citizens(who are not used to use internet or mobile) management system.

## Management Service

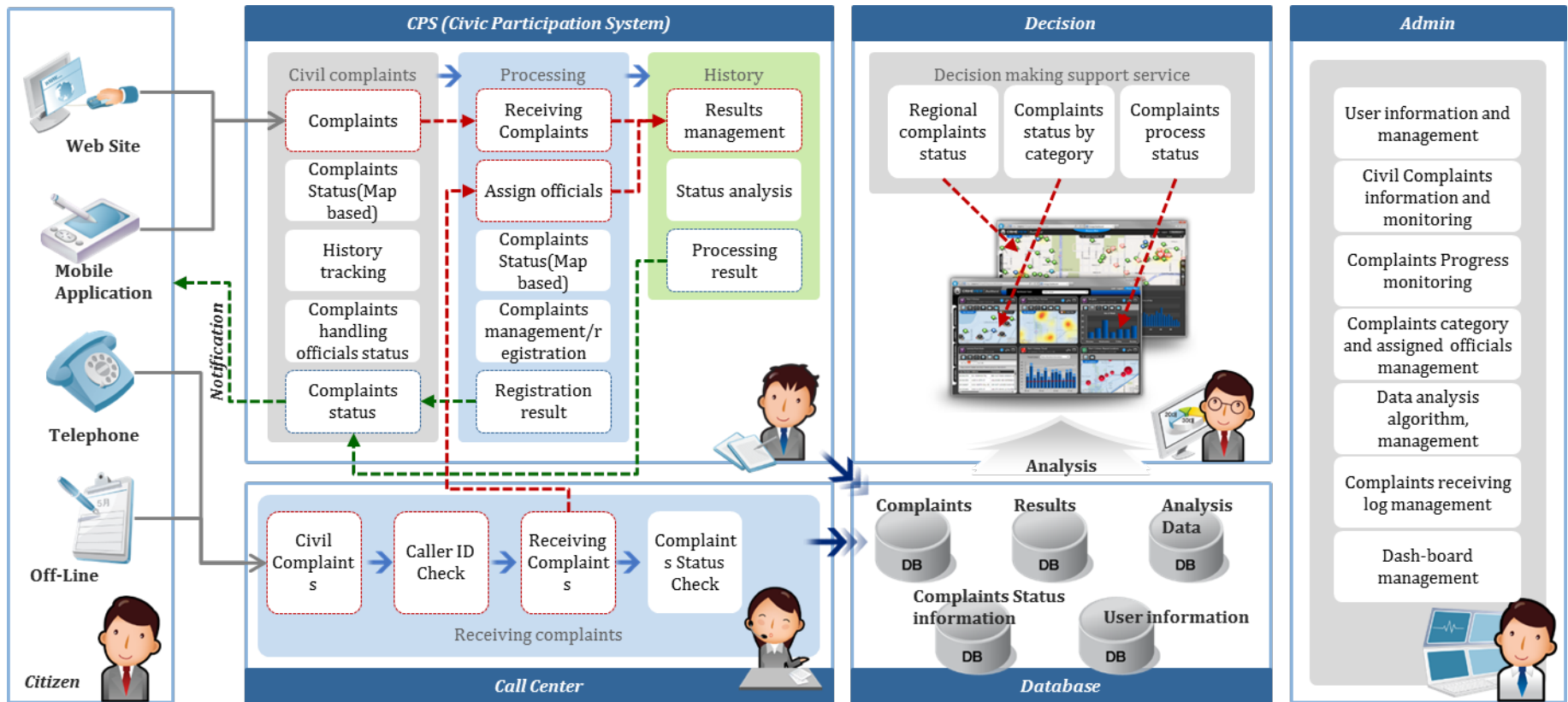
Manage users (citizen, officials) authority, complaints category, and the system.



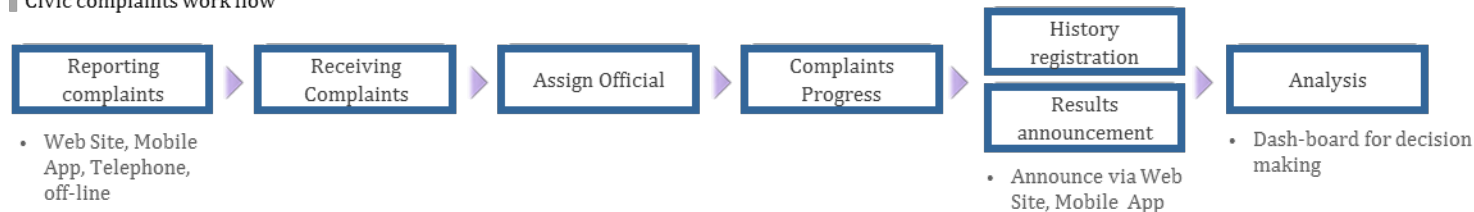


# CPS Flow Chart

Citizen complaints reporting service via various method and to provide effective management for city management decision

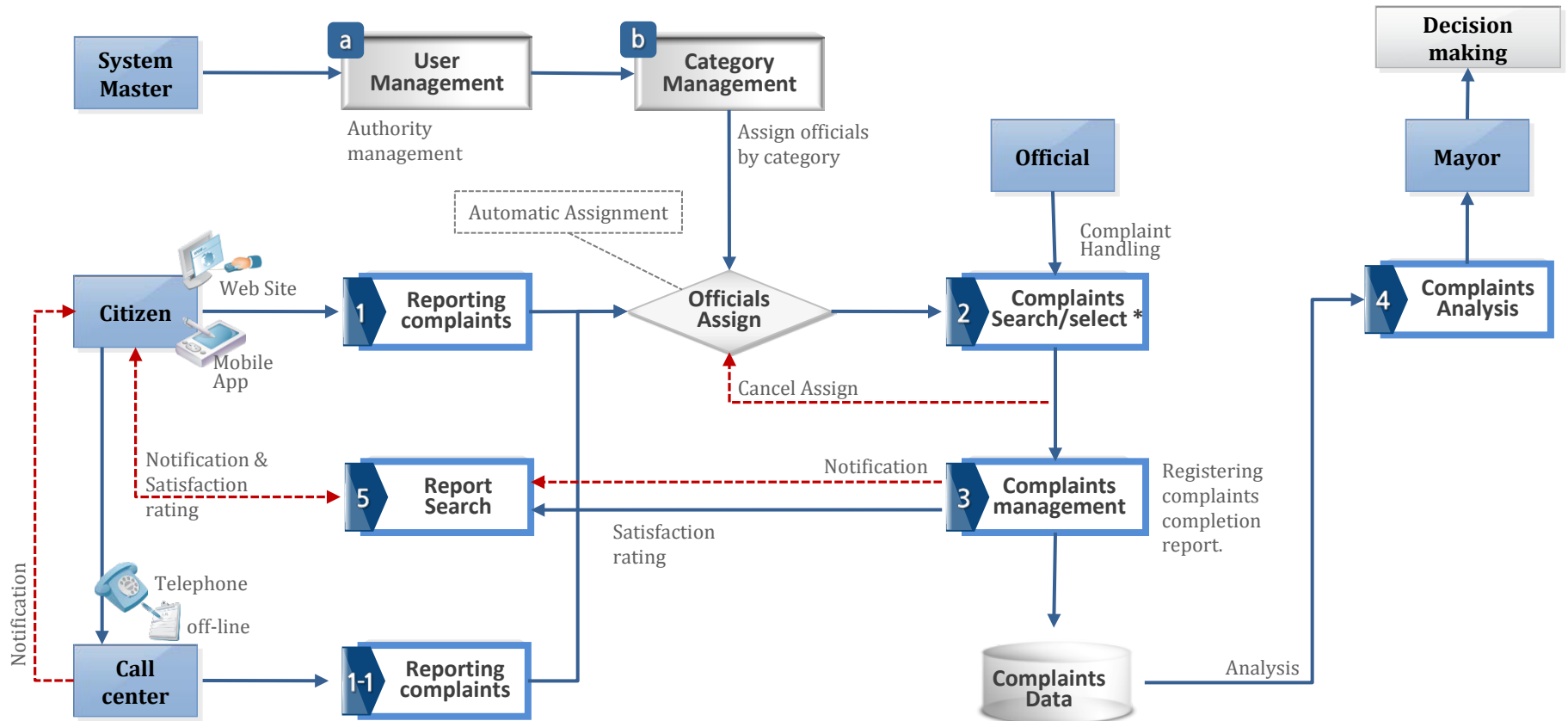


## Civic complaints work flow





# CPS Process Diagram



\* Several officials are assigned to a category. If the citizen select a complaints category and complaints, officials who were assigned to that category can search and select the complaints from the list.

No	ID	Name	E-mail	Phone Number	Join Date	Authority
18	c16030002	name	email@email.com	1234	Mar 03 16	U
17	c16030001	Test	Test123@gmail.com	123	Mar 02 16	U
16	c16010001	Sample	wow@gmail.com	1234567890	Jan 15 16	U
15	c15120001	Earl Burgos	earlburos@gmail.com	8874040	Dec 17 15	U
14	k_kacey	Kacey Kim	yejin.kim@mecandev.com	4821071279212	Dec 08 15	U
13	test1	test1	test1940cps.com	0101111	Oct 26 15	U
12	test3	11	11	11	Oct 25 15	U
11	testlee	tester lee	tsesr@testmail.com	010-111-1111	Oct 25 15	U
10	civic8	Willy			Oct 25 15	U
9	civic9	William			Oct 25 15	U
8	sanfern_calcenter02	sanfern_calcenter02	cal@gmail.com	000-0000-0000	Oct 23 15	C
7	sanfern_mayor	sanfern_mayor	mayor@mayor.com	00-000-0000	May 27 15	M

Managing registered users(citizen, officials) view.  
In this page, you can assign users authorization.

## Providing services

### 01\_ User Search

Search users with search condition.

### 02\_ User Management

To move to the user information management page click on "ID".

### 03\_ User Registration and Authority Management

To register users, use the "User Add" function.

User registration screen.

User authority registration

**Category Management**

Admin

Category

Category Add

Officer Add

Category	Count	Action
BRIDGE DAMAGE	2	Edit
DANGER	2	Edit
FACILITIES DAMAGE	2	Edit
FALLEN TREE	2	Edit
FIRE	2	Edit
FLOODING	2	Edit
LANDSLIDE	2	Edit
NOISE	2	Edit
PEST	2	Edit

**Official Management**

Official Add

ID	Name	Phone Number	Action
sanfern_official01	sanfern_official01	00-000-0000	Edit
sanfern_official02	sanfern_official02	00-000-0000	Edit

This is the page to manage (register, fix and etc.) complaints categories. Assign persons (officials) to the registered complaints categories.

Automatically assigned to the designated officials (preassigned to each category) on reporting citizen's complaints.

## Providing services

### 01\_ Category Management

**Category Management**

Category Add

Category Create

Category Name

Local Category Name

Use Y/N ☒ Y ☐ N

Close Save

To add a new category click on the "Category Add"

Registered categories will be shown on the complaints reporting page.

### 02\_ Officials Management

**Officials Management**

Officials Add

official Search

Select

Detail Terms

Search

No	ID	Name	E-mail	Phone Number	Action
2	colombo_official01	colombo_official01	op1@op1.com	00-000-0000	Edit
1	colombo_official02	colombo_official02	op2@op2.com	00-000-0000	Edit

Close Save

To register new officials, click on the "Officials Add"

In this page, each officials can check the assigned complaints automatically designated by the category-officials classification matrix in the system.

Provide service screens that can register the citizen's complaints with Google map based location information and images.

## 01\_ Complaints category

Users can select the categories for complaints report.  
(Categories can be provided with local languages)

## 02\_ Map based complaints location reporting

Register location information for complaints with Google map selection or address input.

## 03\_ Complaints images

You can upload images for complaints reporting

## 04\_ Complaints posting

Write complaints details and click "Submit" button to complete the reporting.  
Reported complaints information is automatically send to the assigned officials group.

The screenshot shows the 'Complaints Report' interface for San Fernando La Union. It features a map of the city on the left, a sidebar on the right with 'New Complaints', 'In Progress', and 'Completed' counts, and a main area with 'Citizen Information', 'Citizen Details', and 'Complaint Registration' sections. The 'Citizen Information' section has a 'Join us' button and a search bar. The 'Citizen Details' section has fields for Name, Phone, and Email. The 'Complaint Registration' section has fields for User ID, Classification, and Assign.

For citizens those of who are not eligible to use internet or android smartphone can report complaints via phone call. An official who receive phone call from citizens register complaints through the Call Center Service, instead of citizen themselves, and all complaints will be stored as a database to the cloud computing server

## 01\_ Complaints Overview

The screenshot shows the 'Complaints Overview' page. It features a map of the city on the left, a sidebar on the right with 'New Complaints', 'In Progress', and 'Completed' counts, and a main area with a map of the city. The sidebar shows 'New Complaints' with 0 counts, 'In Progress' with 0 counts, and 'Completed' with 0 counts.

Shows reported complaints, processing status, and completed complaints with map based location information for the day.

## 02\_ Citizen Complaints Overview

The screenshot shows the 'Citizen Complaints Overview' page. It features a 'Citizen Information' section on the left with a search bar and a list of citizens. A dashed box highlights a citizen named 'colombo\_citizen01'. An arrow points from this box to a 'Citizen Information' section on the right, which shows a list of registered complaints for that citizen. The complaints include 'Manhole cover is opened it's dangerous', 'Solen tree across road here', 'burning at village garden', 'Rocks placed on the road by the resident to slow down vehicle speed but this pose high risk to motorcycles and bicycle riders, may endanger their life', and 'Somebody can be hurt'.

Searching the citizens, you can view the registered complaints for the citizens.

## 03\_ Complaints Registration

The screenshot shows the 'Complaints Registration' page. It features a form with fields for 'User ID', 'Classification', and 'Assign'. Below the form is a map of the city with a search bar and a list of locations. The form has a 'Position Map' section with a search bar and a list of locations.

Complaints can be registered through the telephone or visiting. You can add category, location, and details of the complaints. Complaints registered through the call center will be assign to the officials in the category.

**Report List**

Official: Complaints Handling

**sanfern\_official01**  
Name: sanfern\_official01  
Phone: 00-000-0000  
Email: op1@op1.com

Receipt: 1 | InProgress: 1 | Completed: 1

**My To-Do List**

WATER SUPPLY  
Sample  
sanfern\_citizen01  
02.03.2016  
23 day ago

**Citizen Complaints**

Receipt	Complaint	Assigned To	Date	Time
<input type="checkbox"/>	NOISE uhni	c16030002	03.03.2016	22 day ago

**Complaints Detail**

**sanfern\_citizen01**  
02.03.2016 10:28 am

WATER SUPPLY  
Sample

No Image

지도 표시

Officials can browse citizen complaints details and accept the unassigned complaints.

## Providing services

### 01\_ Complaints Overview

**sanfern\_official01**  
Name: sanfern\_official01  
Phone: 00-000-0000  
Email: op1@op1.com

Receipt: 1 | InProgress: 1 | Completed: 1

Officials can modify his/her own profiles. Views reported complaints, processing status, and completed complaints for the day.

### 02\_ Complaints List

**Citizen Complaints**

Receipt	Complaint	Assigned To	Date/Time
<input type="checkbox"/>	RUBBISH There was no street cleaning recently. What's wrong with the cleaning workers?	colombo_citizen01	23.11.2015 07:11 am
<input type="checkbox"/>	FALLEN TREE A tree fallen and pl. clear it.	colombo_citizen01	23.11.2015 07:11 am

Display citizen complaints along with the assigned complaints categories to each officers.

Officials can accept the complaints by clicking on the "Add" button.

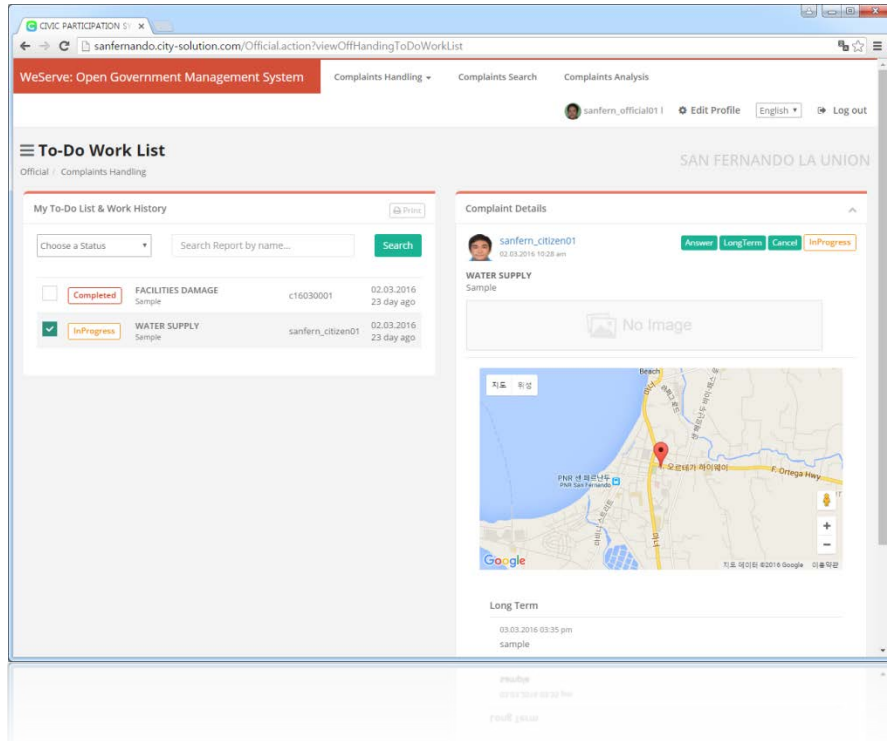
### 03\_ My Complaints

**My Complaints**

Complaint	Assigned To	Date/Time
SEWER a sewer block noticed on Pharmsach road, opp Sri...	colombo_citizen01	20.11.2015 3 day ago
FACILITIES DAMAGE a tree fallen and pl. clear it	colombo_citizen01	18.11.2015 5 day ago
FALLEN TREE Pleas remove the trees.	chic8	25.10.2015 29 day ago
FIRE test	colombo_citizen01	23.10.2015 31 day ago
RUBBISH There was no street cleaning recently. What's wrong with the cleaning workers?	colombo_citizen01	22.10.2015 32 day ago
WATER SUPPLY We have a huge water problem	colombo_citizen01	21.10.2015 33 day ago

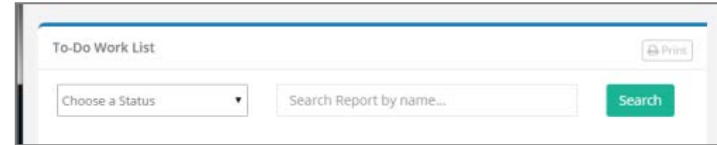
Shows selected/accepted complaints list. To display the complaints detail, click on the each complaint.





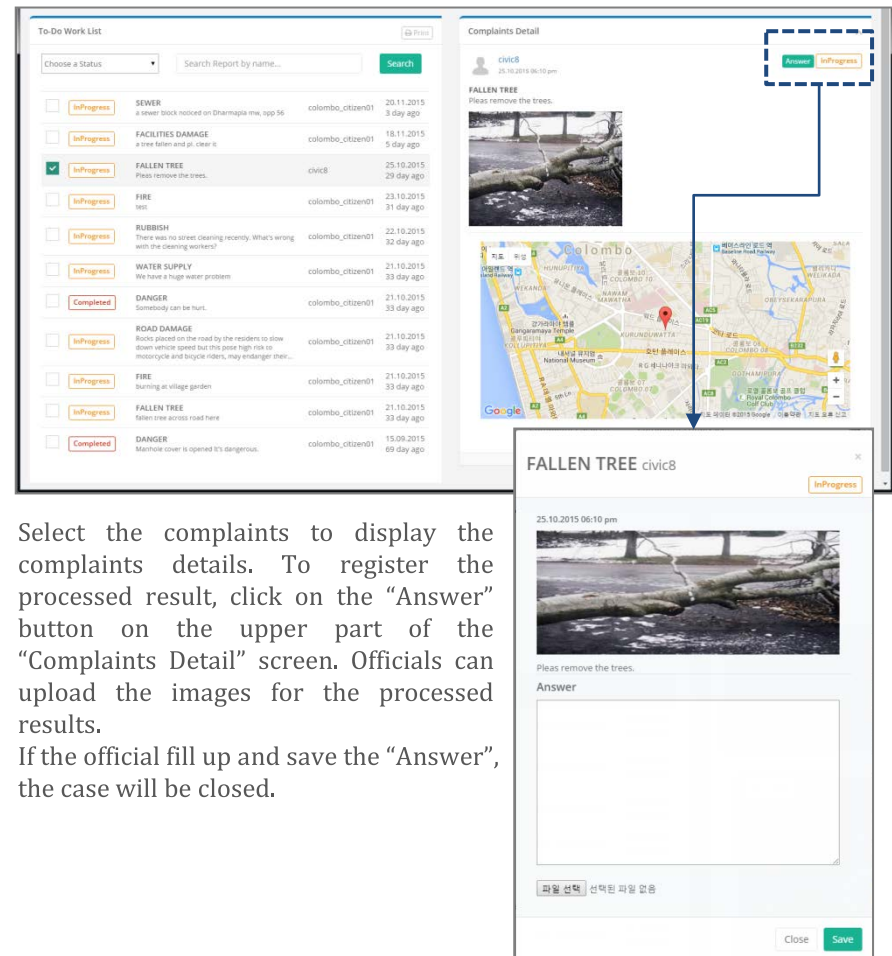
Officials can register processed complaints and upload the images.

## 01\_ Complaints Search



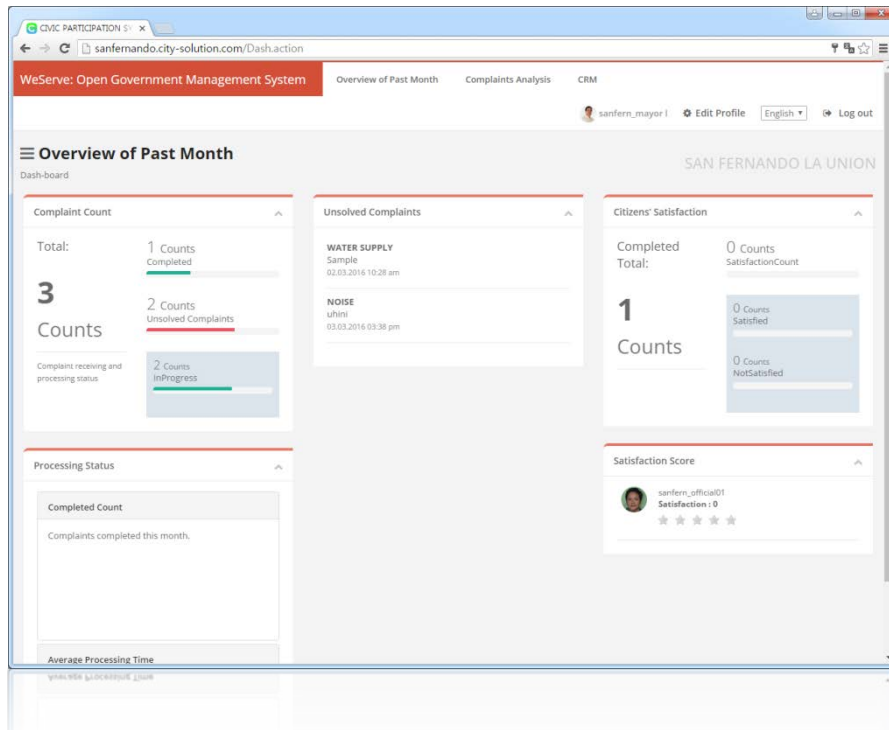
Display assigned (and accepted) complaints for an each official for the selected search conditions.

## 02\_ Complaints Management



Select the complaints to display the complaints details. To register the processed result, click on the "Answer" button on the upper part of the "Complaints Detail" screen. Officials can upload the images for the processed results.

If the official fill up and save the "Answer", the case will be closed.



Display information for the overall citizen complaints for the city.

## Providing services

### 01\_ Complaints Count



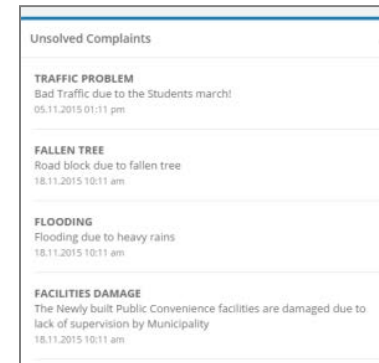
Numbers of completed(closed) complaints and open claims for the registered complaints in the month.

### 02\_ Processing Status



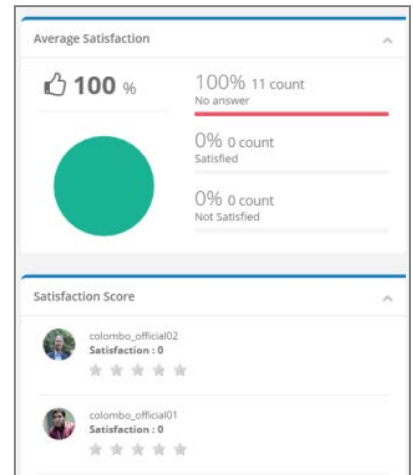
Average count, average processed time, and average delay for the citizen complaints of the month.

### 03\_ Unsolved Complaints



Display unsolved complaints in the order of recent date.

### 04\_ Average Satisfaction



Display the average citizen satisfaction score for the solved(completed) complaints. And, the page lists the officials in the order of high satisfaction score.

Display the reported complaints of the user.

Users can enter the satisfaction score for the completed complaints.

## 01\_ Complaints List

Report list

Receipt	RUBBISH There was no street cleaning recently. What's wrong with the cleaning workers?	colombo_citizen01	23.11.2015 07:11 am
Receipt	FALLEN TREE a tree fallen and pl. clear it	colombo_citizen01	23.11.2015 07:11 am
InProgress	SEWER a sewer block noticed on Dharmapla mw, opp 56	colombo_citizen01	20.11.2015 3 day ago
InProgress	FACILITIES DAMAGE a tree fallen and pl. clear it	colombo_citizen01	18.11.2015 5 day ago
InProgress	SIDEWALK DAMAGE The sidewalks in the townhall square is damage due to heavy traffic and it is difficult to walk here anymore		
InProgress	NOISE There is heavy construction work going on during school hours and disrupting school work.		
InProgress	FIRE test		

Display the complaints list reported by the logged-in users.  
To view the detail information, click on the each complaint.

Report detail

colombo\_citizen01  
23.10.2015 11:10 am

RUBBISH  
There was no street cleaning recently. What's wrong with the cleaning workers?

Answer InProgress

## 02\_ Satisfaction Assessment

If the officials completed or solved the complaints, user can assess the satisfaction level by entering the score.

Answer

colombo\_official01  
21.10.2015 06:16 pm

Completed

Hi, I got it. Next time, please be more careful when you raise claims. Thanks Musu

The complaint handling satisfaction is 5 points.

★★★★★

## **Annex 2. Database of Information Collected from On-Site Investigations**

Organization	Name	Position	Contact
San Fernando, La Union	Ms. Annjanette E. Dimaculangan	City Administrator	
	Jay Carlou C. Sabado		1) email: jay_carlou@yahoo.com 2) mobile: +63 72 607 4363
	Germz Deang		1) email: germz18@ymail.com
Office For Strategy Management	Marilyn Castino	OSM Chief	
	Rizayn Medrando	Strat. Comm. Mngr	
	Michaela Louise Delfinado	KM. Mngr	
	Arvin Camacho	Initiatives Mngr	
City Planning and Development Office	Raman T. Peralta	City Planning & Dev't Coordinator	
City Budget Office	Cleofe Noces	City Budget Officer	
City Accounting Office	Mercy G. Go	City Accountant	
City Treasurer's Office	Edmar Luna	City Treasurer	
Office for Public Safety / Public Assistance and Complaints Unit	Efren Javier	Admin. Officer	
	Dominador Lardizabal	Community Dev't Assistant	
General Services Office / SWEEP	Ramon Anotnio	Gen. Services Officer	
	Celso Jucutan	Landfill Mngr.	
WeGO	Nayoung Kwon	Senior Program Officer	1) email: nayoung@we-gov.org 2) phone: +82 720 2934
	Earl Burgos	Program Officer	1) email: earl@we-gov.org 2) phone: +82 720 2937
	Lim Hakjin	Advisor	1) email: harkjin.lim@gmail.com 2) phone: +82 10 9273 7047
Consultant to Mecander	Wonyoung Lee	Principal Consultant	1) email: wlee@mecanderv.com 2) mobile: +82 10 7242 2437 3) phone: +82 31 607 5591
	Sungjin Cho	Technical Consultant & CEO	1) email: sungjin.cho@mecanderv.com 2) mobile: +82 10 8955 1770 3) phone: +82 31 607 5591
	Junbum Park	Senior Consultant	1) email: park.j.alex@gmail.com 2) mobile: +82 10 4965 1219 3) phone: +82 31 607 5591
	Jeong ho Lee	Junior Developer	1) email: jeongho.lee@gmail.com 2) mobile: +82 10 8563 5454 3) phone: +82 31 607 5591