

- Smart City supported by Japan ASEAN Mutual Partnership -
Smart JAMP

APPLICATION FORM for Smart City Project Formulation Study

1. Project digest

(1) Project Title:

Study for Masterplan of Battambang for Smart and Sustainable Development

(2) Name of the city: Battambang, Cambodia

(3) Category of the study: A+C

A) Masterplan (M/P) study

To formulate a masterplan of spatial planning for an entire smart city or a partial area of the target city, including the direction, comprehensive plan, and individual projects.

C) Feasibility study

To examine the feasibility or concrete details of a priority or model project composing the smart city.

(4) Justification of the Project

- Present condition of the smart city project in the target city:

Present Condition of the City:

Battambang City is the second largest city in Cambodia. It serves as the capital of Battambang province, and is strategically located in the northwest of Cambodia about 300 kilometres away from the capital city Phnom Penh. The City has a resident population at 152,032 and a total land area of 115.44 km². The City is known for its activities associated with rice production and heritage buildings as well as its good quality living environment.

The rapid urbanization process brings the City both opportunities and challenges, including investment opportunities and environmental constraints. As a result, leapfrog developments are often seen, and this puts the pressure on the provision of basic infrastructure, such as roads, drainage and sewage system, waste collection services, and clean water supply.

In terms of spatial planning, the City has the Land Use Master Plan which was developed in 2015 to guide developments. However, the Master Plan is more than 5 years old and needs to be updated in response to emerging concepts of smart city development. Therefore, Provincial Administration has decided to update and revise the exiting plan of

city area to smart city concept aiming to become sustainable development of city, integrating different uses of land to reach balanced territorial development ensuring economic efficiency, environmental sustainability and cultural identity.

The main contents of the Masterplan of Battambang for Smart and Sustainable Development will include a long-term vision, development strategies, and action plan. Through the process of setting up the Masterplan, ecosystem services will be mapped, economically valued and mainstreamed into the “Smart city”, and then development strategies will be developed based on trade-off assessments. The results should aim at balancing economic development of city while at the same time ensuring that the Environment, Protected Areas and biodiversity corridors.

This is the first Masterplan with smart city concept that has a clear focus on promoting socio-economic while protecting the environment friendly.

- Sectorial development policy of the local government/municipality on the smart city project in the target city:

[Referring document]

- ✓ Strengthening management of urbanization under “Rectangular Strategy Phase IV”
 - ✓ New Law on Construction, 2019 and sub-decrees for implementation, 2020
 - ✓ Prakas on Land Development, 2018
 - ✓ Sub-decree No.42 on Urbanization of capital, cities and urban areas, 2015
 - ✓ Law on Road, 2014 • Circular on Cambodia Coastal Development and Management, 2012
 - ✓ Land Law, 2001
 - ✓ Law on Land Management Urban planning and Construction ,1994
 - ✓ Provincial Spatial Planning Handbook, 2016
 - ✓ Strategic Planning Workshop on Localizing the 2030 Agenda through Sustainable Urban Resource Management, 2019
 - ✓ Battambang provincial land use plan for 2030 vision, 2019
- 1) The concept of smart and sustainable city development has been introduced in master planning.
 - 2) Smart technologies may enable residents to be producing information for city management.
 - 3) Integrated, affordable technologies make it possible for city to scale up solutions and impact.

- Outline of the Study:

Under abovementioned situation, the outline of study on sustainable city spatial planning in Battambang is collection of the basic information necessary to propose the vision for improvement of urban environment, measures to resolve urban problems and to realize the vision including application of smart technology, and priority projects.

The study is consisted of following activities:

Reviewing (understanding of current situation):

- (1) Review of existing plans and current situation of Battambang City
- (2) Clarification of the project implementation system such a budget creation, role of organization, relation with concerned department and ministries of the Central Government
- (3) Consideration of involving parties in the context of industry, tourism, energy, academia and etc.
- (4) Review of the efforts of smart city promotion in Cambodia

Envisioning (proposal of visions based on issues):

- (1) Examination of the image that a smart city should be
- (2) Extract of urban problems and examination of solutions and approaches
- (3) Improvement the role of administrative service
- (4) Necessity of data management

Planning (proposal of a road map and priority project):

- (1) Confirmation of the system of permits and licenses and procedure relating to the development of smart city and model project (budget allocation is needed)
- (2) Making of the road map toward the improvement of urban environment including realization of smart city, examination of the direction of cooperation
- (3) Interview to the private sector for possibility of investment
- (4) Setting of conditions of the priority project or model project
- (5) Examination of the project promotion system for solving urban problems including realization of the smart city
- (6) Examination of the action plan including capacity development

Feasibility study or preparation of concrete detailed for priority or model project:

- (1) Objective of feasibility study for selected project
- (2) Establishment of implementation structure
- (3) Adoption of smart technologies
- (4) Cost estimation (Detailed design, implementation and maintenance & operation cost)

(5) Economic and Financial analysis

(6) Seeking fund

- Purpose (short-term objective) of the Study:

- To review and formulate a city spatial development planning in Battambang City
- To propose an action plan to realize the Master Plan by introducing a smart technology
- To select the model area or priority project to improve into smart city concept with feasible scheme

- Goal (long-term objective) of the Study or entire project:

- Achieve sustainable an entire city operation in terms of cost and environment by implementing smart technology
- To promote public awareness and understanding the smart city concept to improve the healthy environment and economic growth

- Other relevant projects, if any.

Attachment

(1) Candidate model area

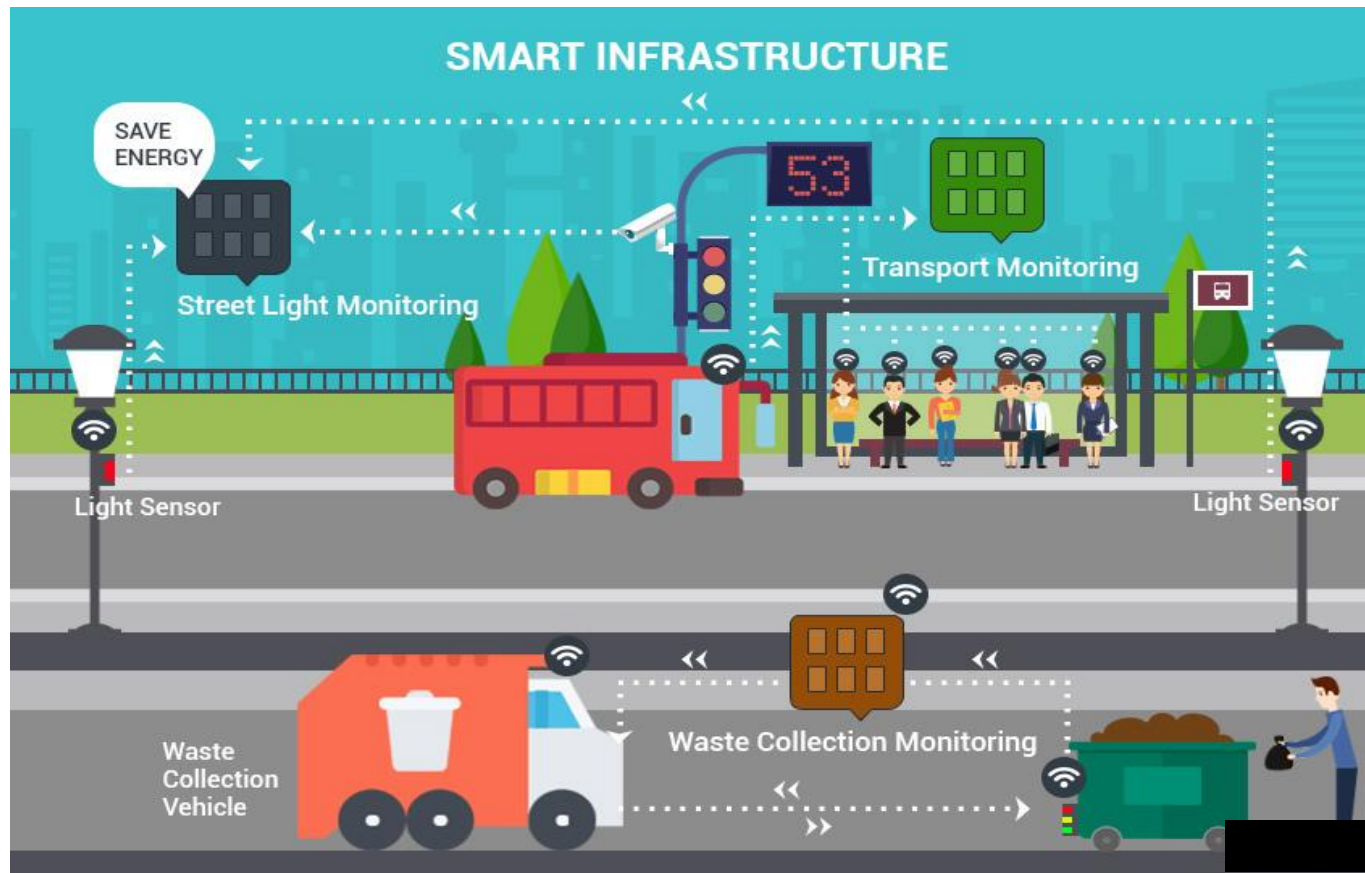
(2) Image of smart technology

(3) Harmonized city concept

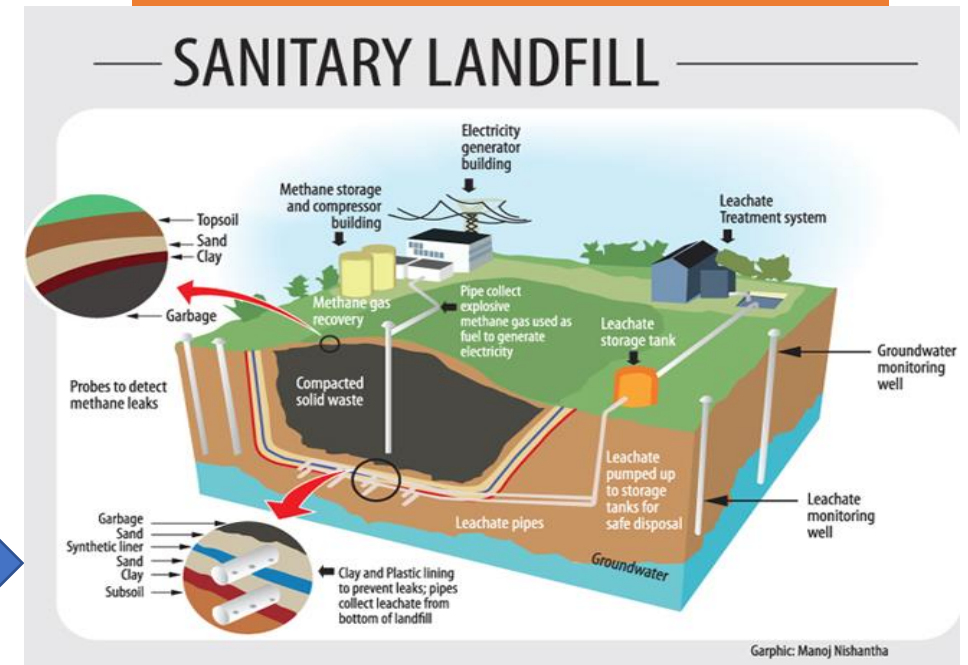
Att-1: Candidate at Model Area for Spatial Planning along Sanger River into Smart City Concept



Att-2: Image of Smart Technology



Sanitary Landfill(Improvement Soil Condition/Deodorant)

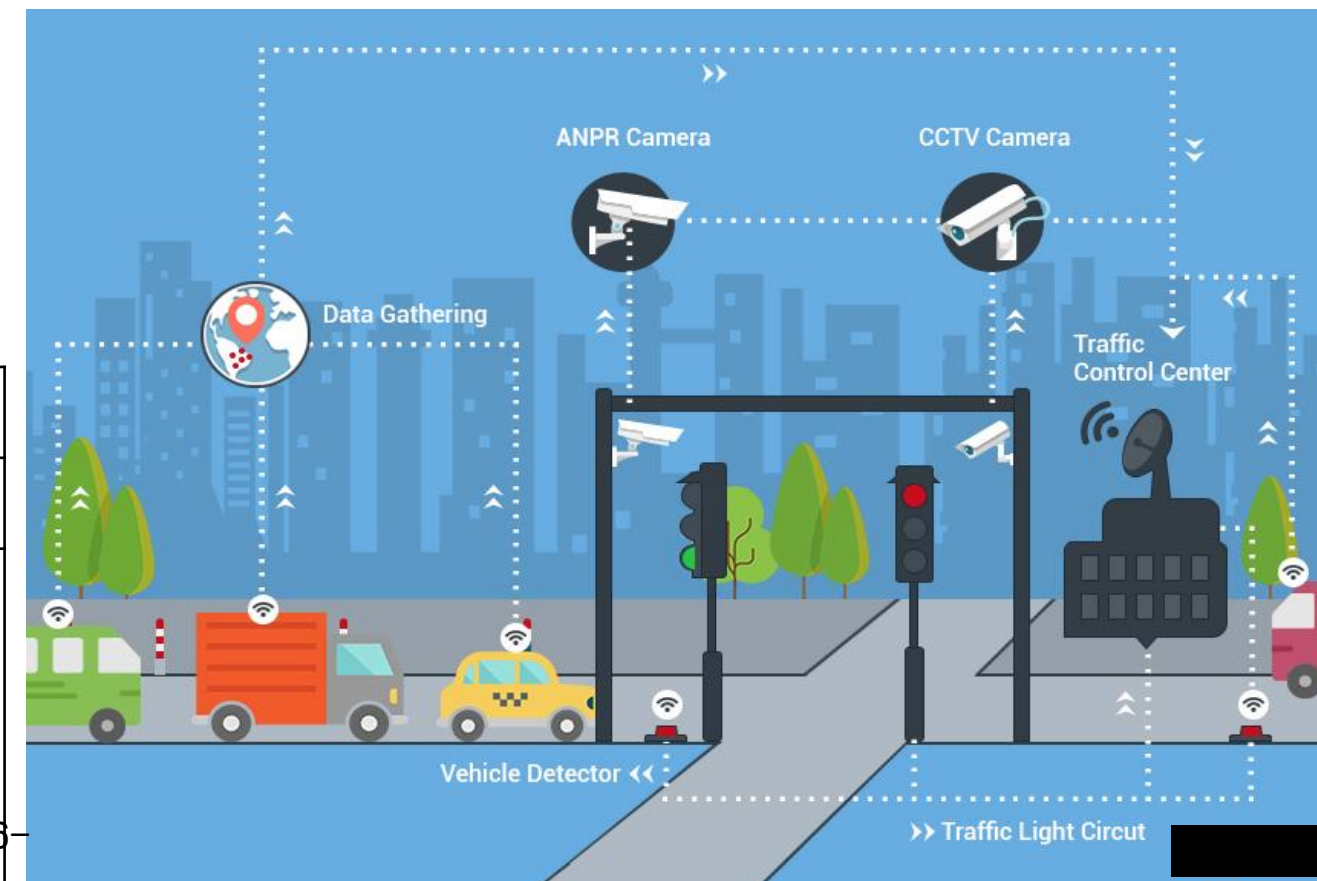


Enrichment of Administrative services

- Establishment of smart city stations
- Identifying role of government (data management)
- Supervision of smart solutions in each sector
- Management of living indicators

City OS (Integration of various data)

Input data	Expected output
<ul style="list-style-type: none"> • Traffic data • Urban development • Environment data • Tourism monitoring • Energy monitoring • Measurement of infection 	<ul style="list-style-type: none"> • Traffic demand management • Centralized management of development projects • Enhancement of Web-site • Regional energy management system • Behavioral control of infected people



Att-3: Harmonized City Concept

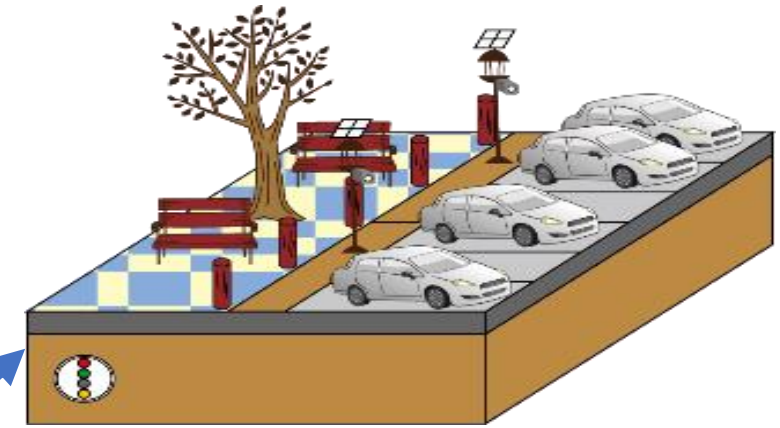
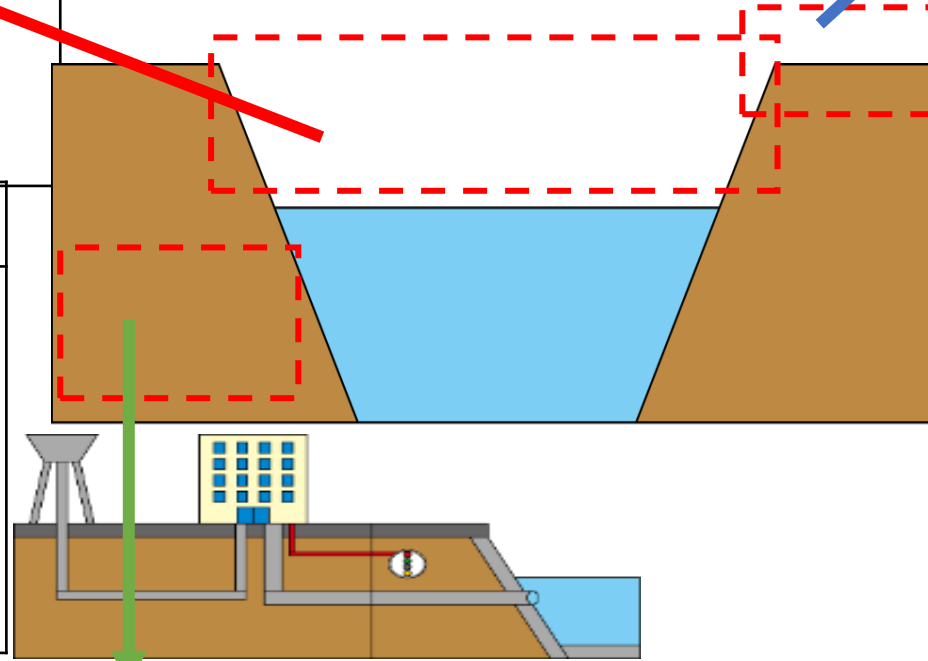
Purification river/Landscaping



Permeable sidewalk/Smart toilet



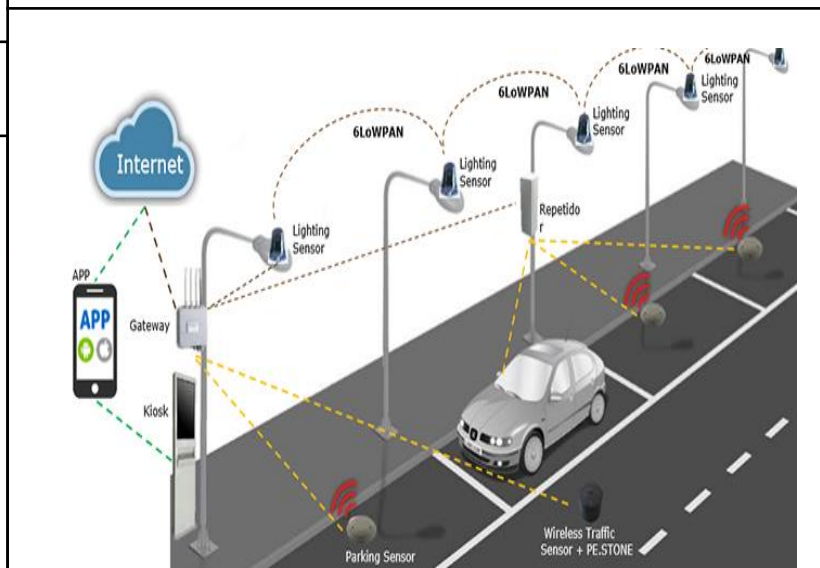
Solar energy、Energy Sharing



Smart Lighting with environment sensor



Smart parking with CCTV camera control



Water and sewage pipe maintenance system



Undergrounding and utility tunnel

