

PHNOM PENH SMART CITY AND SUSTAINABLE DEVELOPEMNT



KINGDOM OF CAMBODIA



PHNOM PENH ADMINISTRATION

ASEAN-JAPAN Smart Cities Network High Level Meeting 8-11 October 2019 Yokohama, Japan

> VANNAK SENG General Secretary PHNOM PENH Capital Hall 2019

I. HISTORY

- The city was created in King Ponhea Yaat era in 14th century.
- Phnom Penh has been an urban area since 1443 and built its infrastructure as a city during French Colonial Regime
- Phnom Penh locates on the southern of central area of Cambodia and on the junction of Tonle Sap River, Mekong River and Basak River. Theses Rivers provide the ecology system of fresh water and the river with potentials which is the main resources for sustainable environment.
- Before 1970, the city of Phnom Penh was acknowledged as the pearl of Indochina. Unfortunately, between 1970 and 1975, Phnom Penh fell into civil war, in the genocidal regime of 1975-1979, all the people living in the city were expelled to live in the remote areas and the city became a ghost city.
- Infrastructure was destroyed as a result of war, bombing and various covert wars strategies, giving more various disasters to the root.
- After the liberation on January 7th, 1979 people who survive returned to live in abandoned house in the city



1960's: The city has grown under a planned urbanization with many new buildings, infrastructure, Architecture



DAMMAGED AND ABANDONED CITY : Ghost town between 1975-1979



II. PHNOM PENH TODAY



- Surface: 692,46 Km2
- Capital status: since 1865
- Population:
 - 2008=1,501.725
 - 2019=2.129.371 (census 2019)
- Annual Growth rate: 3.2%
- Division Area: 14districts, 105 Communes
- Density
 - 2008= 2,212/sq.km
 - 2019= 3,136/sq.km
- Economy is based on commercial interests such as garments, trading, small/ medium enterprises and tourism
- The property business has been booming, with rapidly increasing real estate prices in the past few years.
- GDP Cambodia : 1,205 USD/capita (2019)
- **GDP** Phnom Penh
 - 2005= 820USD/capita
 - 2019= 2,534USD/capita



Constructions in Phnom Penh









Facts about PHNOM PENH:

Population in the day : up to 3M Roads : 1883 Km long , Drainage System : 702 Km long Compounds: 134 , Buildings : 791 (<10 Floors:474, >10 Floors:309, >40 Floors:8) Markets: 337 Factories: 857 Manufactures: 3840 Entertainment places, Restaurent, Hôtel, Guest House : 2105 Vehicle: more than 2M (Growth rate: 11%/year)



III.CURRANT MAIN CHALLENGE Public mobility problem

Causes:

- Rapid urban growth / Economic growth
- Rural exodus
- Lack of urban transportation network
- Lack of public spaces and urban green spaces
- Lack of detailed plan for districts for local development (Plans, laws and regulations)
- Lack of application of zoning plan
- Lack of civic education

Consequences:

- Urban sprawl in peripheral areas
- Insufficient public equipment, urban sanitation issues
- Traffic congestion due to increasing number of private vehicles
- Pedestrian unfriendly city
- Deterioration of urban environment due to traffic and waste
- Lack of coherence between existing city and new urban development projects (gated cities)



IV. SOLUTION FOR PHNOM PENH SMART CITY INITIATIVE

Vision	 To improve the urban environment to enhance citizen's To improve the public mobility
Focus areas	 Built Infrastructure: Phnom Penh city needs Green resinfrastructure serving current and future city growth. Quality Environment : Our city needs a good public span healthy environment and boosting economic growth Civic and social involvement: Social media and networfor public hearing on many issues specially on public and public transport service improvement. Improve pedestrian mobility : by providing and attractionation and businesses Improve the efficiency of Phnom Penh Public Bus Service modal share

quality of life

silience and efficient

pace design creating

ork would be launch space management

ive walk able paths ility between people

vices: to achieve 50%

Building public infrastructures











V. MAJOR ISSUE : Source of major urban problems



- Lack of regulations on fund to rehabilitate the sidewalks for decades
- Private owners of the ground floor properties abuse the sidewalk
- Sidewalk has lost the function to serve pedestrians
- transportation network

public spaces usage and

Lack of complying the law Lack of a reliable public

VI. PHNOM PENH SMART CITY FOR ASCN PROJECT 1 : 11 SIDEWALKS REJUVENATION













- 3/11 important undergoing (Monivong, Russian, Sisovath).
- **Trees were newly planted and/or replaced along the 3** boulevards;
- Drainage system were recently installed along the **boulevards**;
- Streetscape and street supporting facilities such as smart lighting, bus shelters have been built;
- Real time and volume based smart traffic lighting and **CCTV** monitoring centre (for the benefit of traffic management and security purpose);
- A study and detail urban design for PP-Southern areas was fully completed with technical support from Paris (to address various concerns such as liveable streets, greening streets, flash floods control systems, setback for activities, modern street furniture and smart lighting...);

boulevards rehabilitation are

PROJECT 2: A. IMPROVING PUBLIC TRANSPORT DEVELOPMENT EFFICIENCY PROJECT OVERVIEW:



OBJECTIVE:

- taxis, ride-hailing service etc. **GOALS:**
- broader routes;
- services etc).
- **Execute PP City** transportation 2035
- pollution in Phnom Penh
- affecting the well-being of the people.
- provision of available transport convenient price, safe and comfortable.

To broaden City Bus capacity and empower other forms of public transport such as river boat, AGT,

Increase city bus service capacity to cover a

Modernizing bus service efficiency with smart technology (cashless payment system, GPS tracking system, infrastructures, customer

Master Plan of Public

Reduce traffic congestion, traffic accidents and

Reduce the cost of personal use, save money and

Participate in reducing of people's through the service

B. IMPROVING PUBLIC TRANSPORT DEVELOPMENT EFFICIENCY



Introduced:

- 13 routes (with 235 buses as of June 1st 2019);
- (Near Field Communication)
- application
- Recognizing roles of private

AGT feasibility study with Japan. Complete Inception report for Supporting Sustainable Integrated Urban Public Transport Development (SSIUPTD) with support from ADB, Japan for poverty reduction and JICA.

 Smart payment through NFC connectivity • Real time based bus traffic Smartphone

hailing services provider for a better connectivity and mobility (such as PassApp, Grab, WeGo...) to enable traditional motor taxi and tuk tuk to connect public to bus station.

C. IMPROVING PUBLIC TRANSPORT DEVELOPMENT EFFICIENCY Traffic Management System



PROJECT OVERVIEW:

- A. OBJECTIVE:
- To improve the traffic situation in Phnom Penh through the use of traffic management system, building a new traffic light and control center at 100 confluence points 115 (revised to implementation Project).
- **GOALS:** Β.
- 109 traffic lights located in town center are \bigcirc connected to the fiber optic traffic control center to order from the center or run by remote control.
- Six more Traffic lights on National Highway 1 were launched Stand Alone not connected to the traffic control center.

Traffic Control Center (City Hall)

the at time of



1. Planning, Survey and Kick-off





2. Procurement of Equipment







4. Signal Installation and Removal Work







5. Intersection Improvement Work









7. Materials Testing and Handover Procedure



3. Civil Works



6. Wiring Connection, Fiber Optic Cabling Work





8. Interior Work of TCC and Training

WORK HIGHLIGHTS



D. IMPROVING PUBLIC TRANSPORT DEVELOPMENT EFFICIENCYC

Supporting Sustainable Integrated Urban Public Transport Development.

The PP-SSIUPTD-2035

Key Outputs:

1. The policy guides & planning toolkit for relevant public transport authorities were developed.

2. The candidate integrated urban public transport improvement programs (PTIPs) were formulated, the issues mapping were completed and the pilot sites were already identified such as:

- **PTIP-1 Inner City Revitalization**
- PTIP-2 East West Bus Rapid Transit (BRT) Corridor
- PTIP-3 Multi-modal transport interchanges/ Transit Oriented Development (TOD)

3. Next step is the improvement on urban public transport management capacity through:

- Study tour to review and discuss good practice
- Workshop/training to design urban public transport system using the policy guide and toolkit
- Awareness raising to promote the use of urban public transport system in terms of safety, security and efficiency target such as women, men and children



PRIORITY PILOT PROJECT

Bus Priority Corridor

Purpose:

Improving accessibility, safety & connectivity in vicinity of bus stops, rail stations and transport interchanges

"people-and environment-friendly urban conditions" "support & vitalize urban activities"

Goal :

integrating bus priority lane & related bus stop/shelter with pedestrian sidewalk & adjacent public space using ICT/CCTV, direction & information signage, street lighting, solar panels for energy. Location : Monireth boulevard



"support & vitalize urban activities"

PROPOSE OF REQUESTING

Requirement	 Funding support for CBA to strengthen its operation authority of Urban transportation Data base collection of Public transport Technical assistance from private specialized compa Supporting for one way system design Urban Transport Master Plan Capacity building and enhance the traffic control system
<image/>	 Introduce smart payment inside the bus through NFC constitution. Introduce smartphone application for real time information location. Set priority and improvement of efficiency of urban transsonal introduce smart traffic lighting which could be adjustable volume to ease traffic congestion and keep space for public bus Supporting sustainable integrated urban public transport study future Bus Rapid Transit network (BRT) and Transs (TOD). This project also covers urban transport policy frame wor along the BRT corridor and TOD areas by using smart technology such passenger and smart phone application. Assign technical officers to joint and sharing experience workshop, training course and seminars.

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orks and urban design

as: real-time traffic data,

e in smart city/smart nation

EXISTING BUSINESS AND OPERATION PARTNERS

No	Description	Project
Intern	ational Corporation	
1	AIMF	Public Space Design
2	City of Paris	Detail development plan
3	Japan International Cooperation Agency	Master Plan of Urban Trans
4	Asian Development Bank (Japan Fund for Poverty Reduction)	Supporting Sustainable Inter Public Transport Developm
Non g	government organization	
5	United Nations Development Programme	Joint for introduction Grab
Local	Company	
6	ACLEDA bank	Smart Bus Payment system
7	Grab	Shared Vehicles
8	PassApp	Shared Vehicles
9	Vigo	Shared Vehicles



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