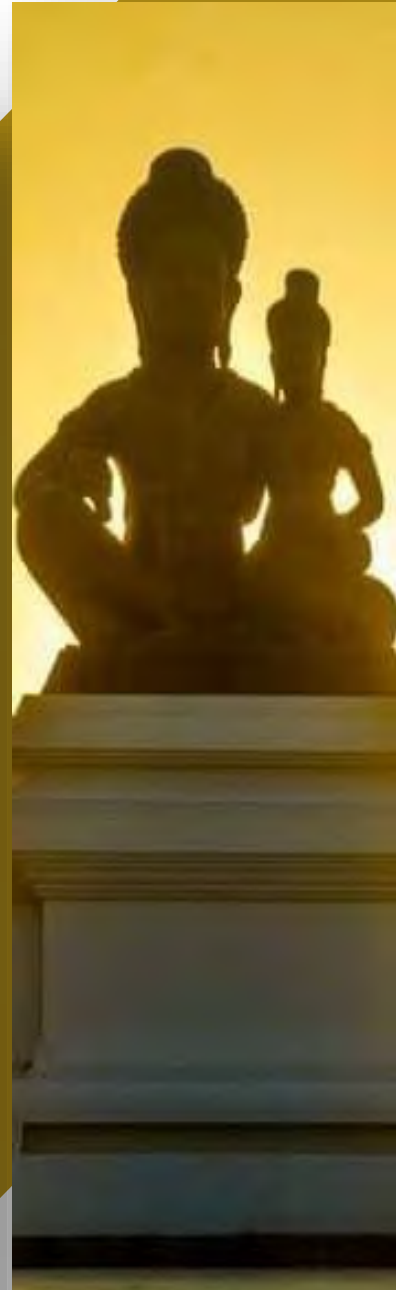




Preah Sihanouk Provincial
Administration



Smart City Initiatives in Sihanoukville

Presented by: Sihanoukville Smart City Task Team

13 May 2025



Urban Context



Preah Sihanouk Province has been identified as **one of the four major priorities** in the national tourism development strategic plan

1

Supported by upgraded autonomous port and international airport, position Sihanoukville city as both a **logistical hub linked to ASEAN and global markets**

2

Preah Sihanouk Province stands out as the only province in Cambodia that has been transformed into a **Multipurpose Special Economic Zone** by the government

3

Aiming to be the **Smart City**, by integrating the city and surrounding areas while also preserving national cultural identity, ensuring sustainability and inclusivity

4

Preah Sihanouk Fact Face

Land area	: 2,659 km sq.
Coastline	: 176 km
Islands	: 32
Cities/districts	: 3 Cities, 3 Districts
Sangkat/Communes	: 29 (111 villages)
Population	: 310,072
Economic growth rate	: 6.0% (2024)
Income per capita	: \$4,602 (2024)
Poverty reduction	: 1.22%

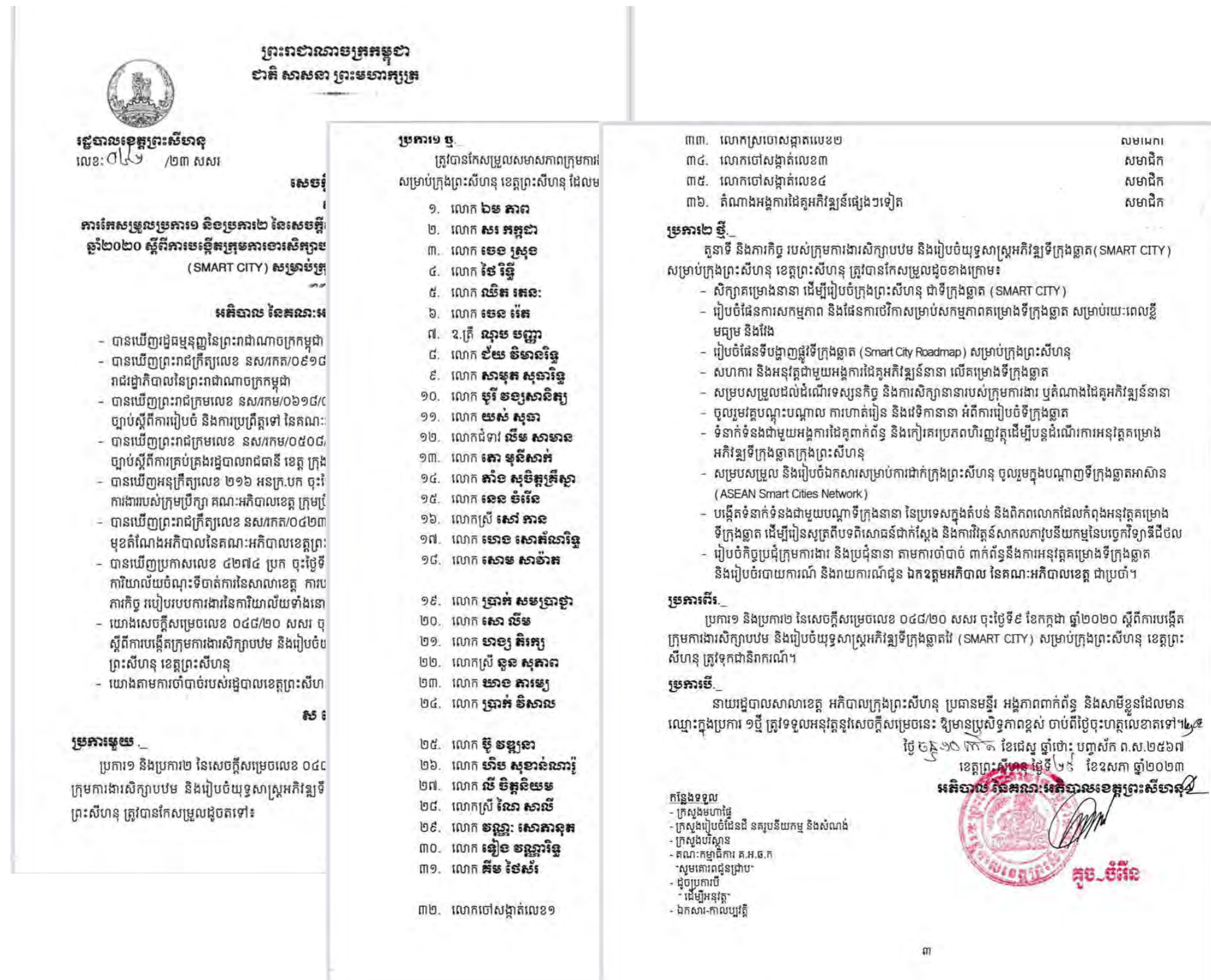


Sihanoukville Smart City Initiatives



Institutional Arrangement: Sihanoukville Smart City

- First discussion between UN agencies and Provincial Governor in 2019
- Chaired by deputy governor, Smart City Working Group with around 30 members was established in 2020 and adapted in 2023



Policies and Plans: Sihanoukville Smart City

Collaboration: United Nations Cambodia

“Smart City Concept: Sihanoukville for All”

Smart>>>

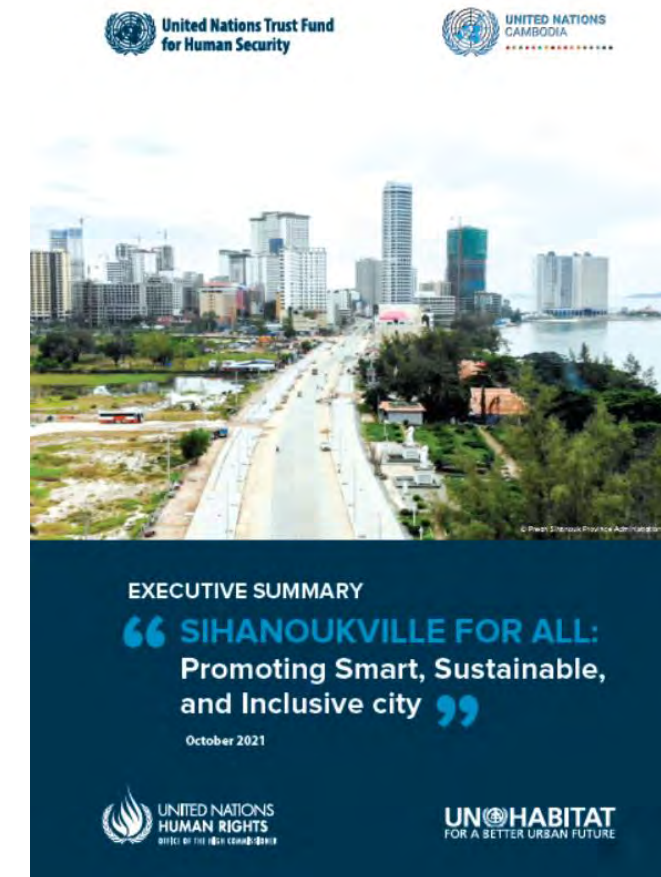
Sustainable>>>

Inclusive>>>

1. Smart Planning & e-governance through Innovative digital Participation

2. Smart services for Citizens through crowdsourced data and information

3. Digital empowerment to reduce the digital divide and foster Human Security



Policies and Plans: Sihanoukville Smart City

Collaboration: with 3i program of Australian Embassy to Cambodia



Smart City Strategy



Smart City Design Roadmap



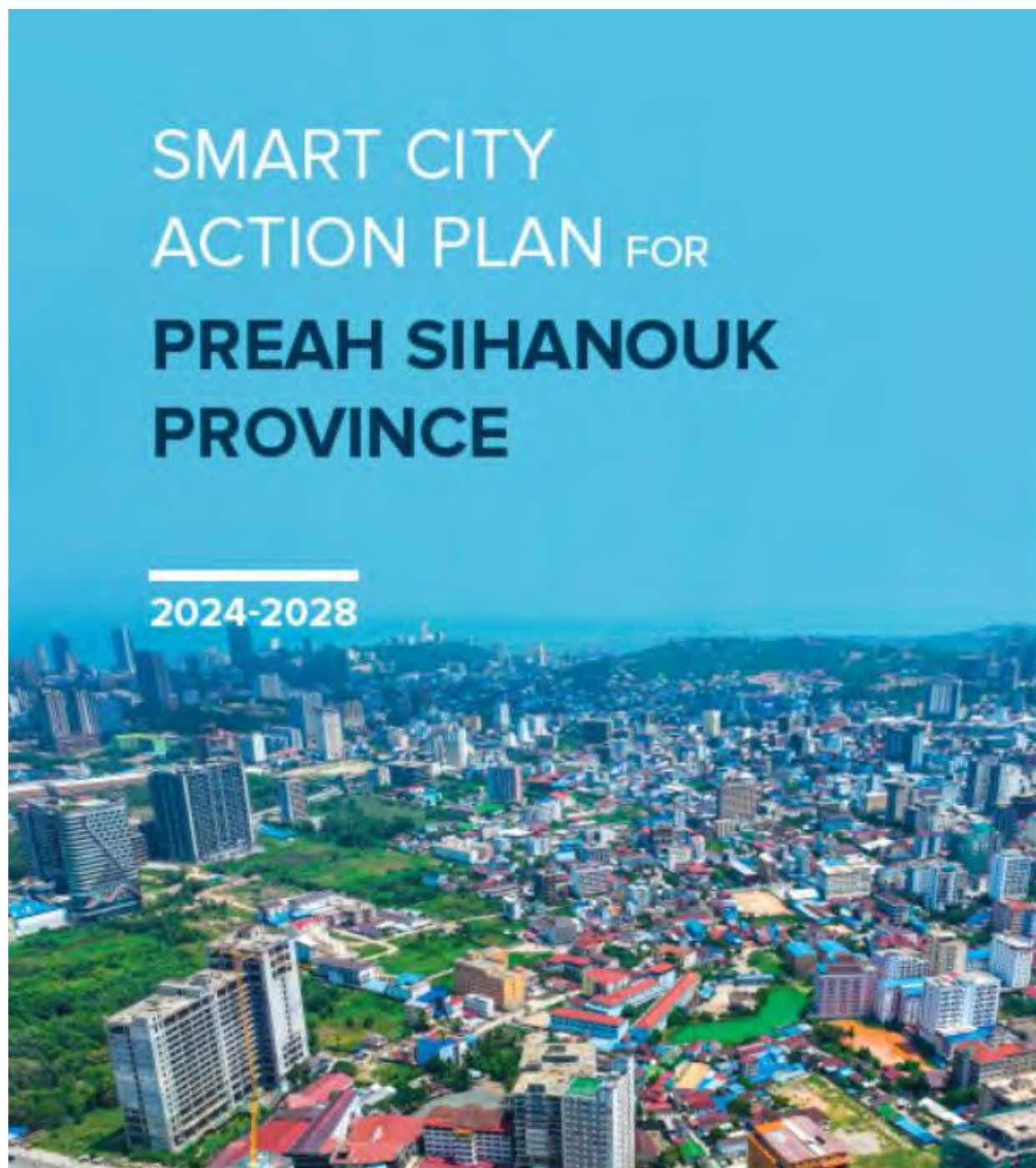
Smart Parking Feasibility Study



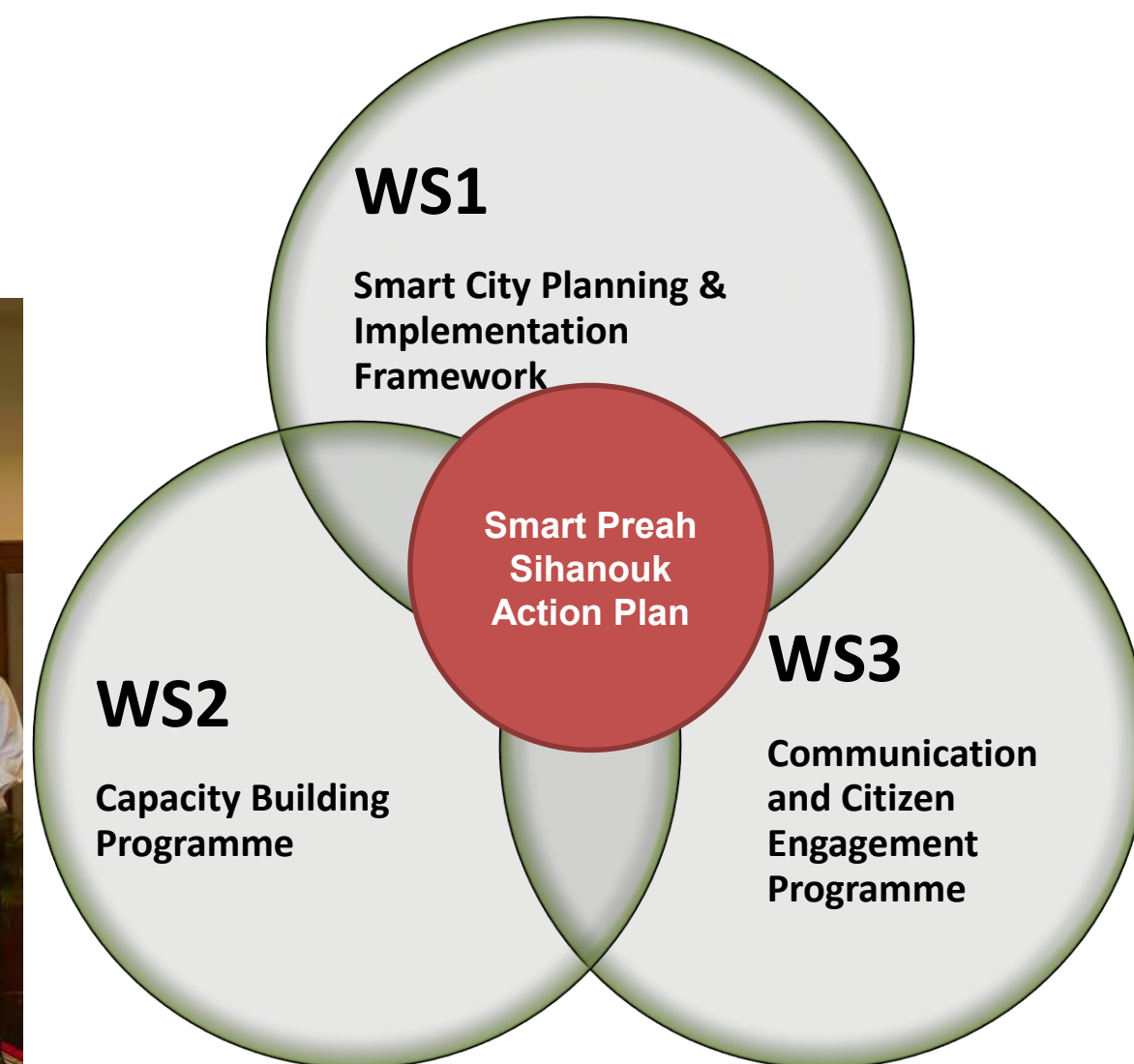
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Policies and Plans: Sihanoukville Smart City



Mainstreaming Smart City in Provincial Development Policies



To effectively **ideate** and **implement** smart city projects the action plan comprises **3 workstreams**

Prepared by
Preah Sihanouk Smart
City Working Group



Supported by
United Nations Human Settlements Programme
(UN-HABITAT) and Ministry of Land, Infrastructure
and Transport of Republic of Korea (MOLIT)



Action Plan for Smart City in Preah Sihanouk (2024-2028)

Proposed Actions and Implementation Measures

Digital Governance	Digital Economy	Smart Living
<ul style="list-style-type: none">• Smart Preah Sihanouk Platform for e-participation• E-Governance platform for citizens• Smart Neighbourhood Centres• Playful Smart Urban Planning for Youth• Digital Literacy Program for Citizens• Public Service Access Points	<ul style="list-style-type: none">• Digital Business Hub• Smart Tourism Portal• Innovation and Entrepreneurship Support Prog.• Green Technology Initiatives• Financial Technology Advancement	<ul style="list-style-type: none">• Smart Infrastructure• Smart Home Integration• Community Health Monitoring• Enhanced Public Safety and Security Solutions• Sustainable Urban Farming Initiatives• Digital Inclusion Programs
Smart Mobility	Smart Waste Management	Smart Environmental Management
<ul style="list-style-type: none">• Smart Parking Solutions• Traffic Signal Actuation• Public Bus System• ANPR Monitoring System• MaaS for Tourism• Electric Mobility Expansion• Micro-Mobility Integration• Real-Time Traffic Management System	<ul style="list-style-type: none">• Promotion of 3Rs Approaches or Zero Waste to Landfill Initiatives• Smart Waste Management• Waste-to-Energy Solutions• E-Waste Management Program• Composting Initiatives• Real-Time Monitoring System	<ul style="list-style-type: none">• Comprehensive Pollution Control Program• Water Quality Improvement Initiative• Air Quality Monitoring Network• Green Zones Development• Public Awareness Campaigns on Envir. Health• Early Warning System and Disaster Risk Reduction

Collaboration: with UN-Habitat

- ✓ Smart data collection of waste management through Waste Wise City Tool (WaCT)

Cambodia



City: Sihanoukville

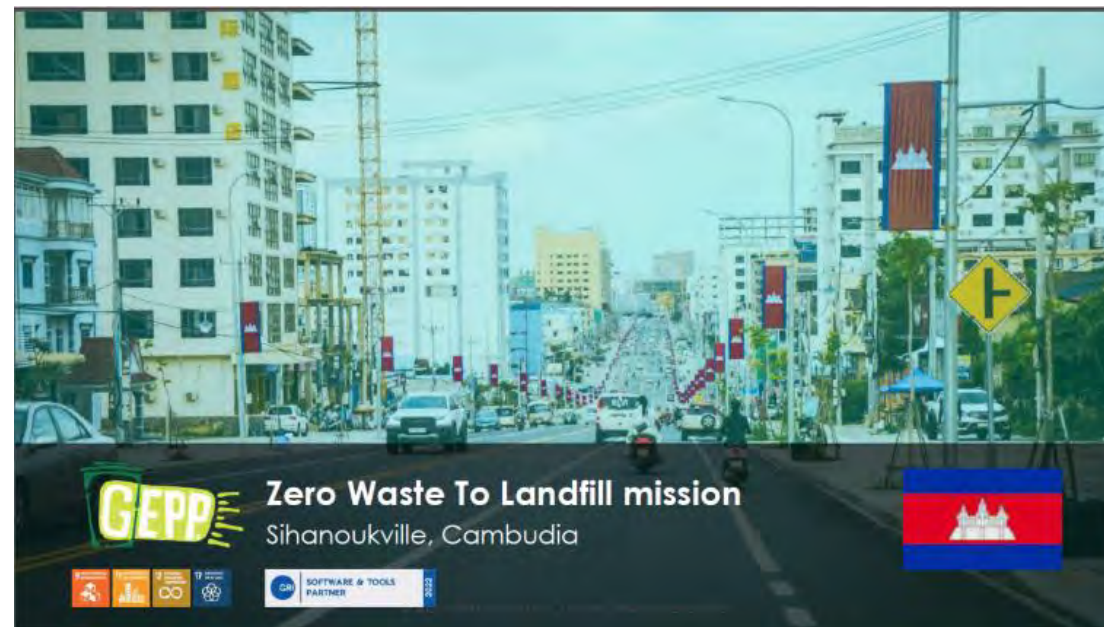
Year: 2021

RESULTS: Sihanoukville 2021

Total MSW generated	366	t/day
MSW generation rate	1.75	kg/capita/day
Household generation	0.64	kg/capita/day
Household food waste	0.32	kg/capita/day
MSW collected	90	%
Collected & controlled	0	%
City recovery rate	4	%

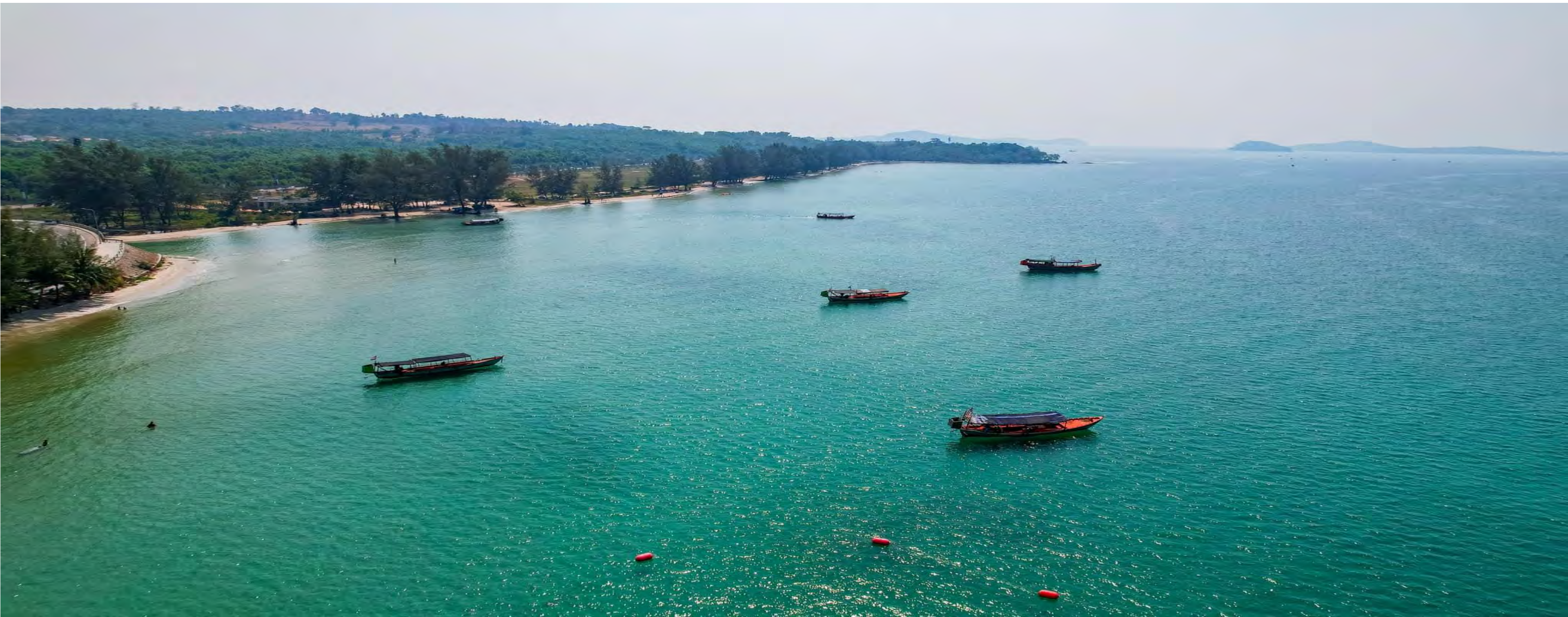
Collaboration: with UN-ESCAP

Sihanoukville Municipality has involved in «Smart City Innovation Lab» through a start-up to implementing Zero Waste to Landfill mission

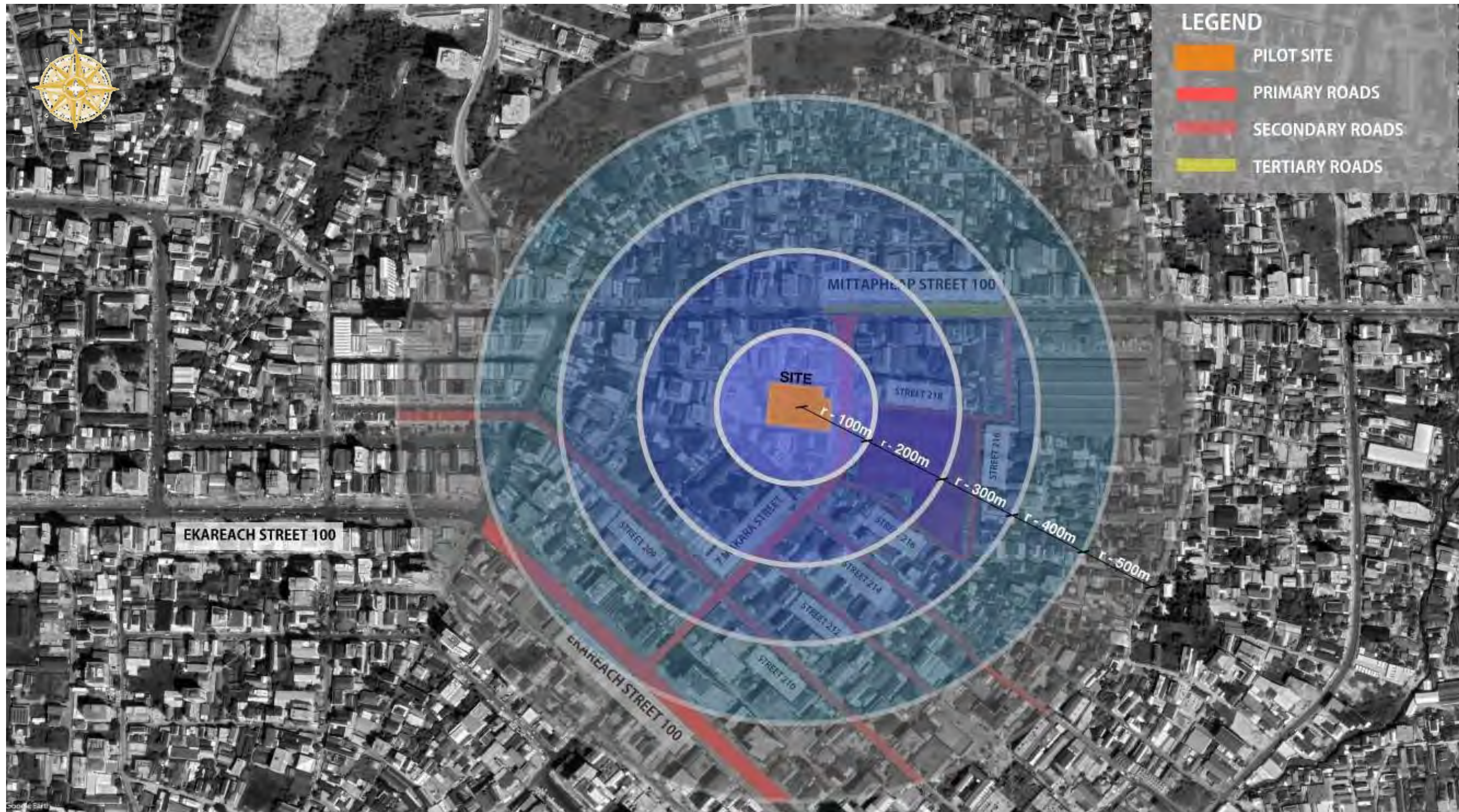


- ✓ Recyclable data monitoring system and public promotion on waste sorting and reducing waste to landfill
- ✓ Restaurants and schools

Pilot Projects



Government Project: Psar Leu parking lot was selected for a pilot Smart Parking through PPP framework in Cambodia



SIHANOUKVILLE'S PARKING CHALLENGES

- ▶ Limited public parking spaces across the City
- ▶ Fragmented approach to parking management: a wide range of parking management and scattered parking resources
- ▶ No unified standard for access and release of parking space information and for user convenience, safety and inclusivity
- ▶ Lack of parking data integration constraints long-term parking and mobility planning

Leading to



Smart integration of parking resource is a potential solution for the City. Smart parking is about using IoT to collect and deliver real-time parking information to users and provide an enhanced parking and traffic management experience for drivers and pedestrians.



Pilot sites assessment for Smart Parking





Traffic congestion around the pilot sites



Updated development mix options

Single-phased development

Option 1	Option 2	Option 3	Option 4
Total floors= 12	Total floors= 12	Total floors = 12	Total floors = 10
7 Parking floors	6 Parking floors	6 Parking floors	5 Parking floors
5 Commercial floors	6 Commercial floors	6 Commercial floors	5 Commercial floors

Non-stack parking



Puzzle parking

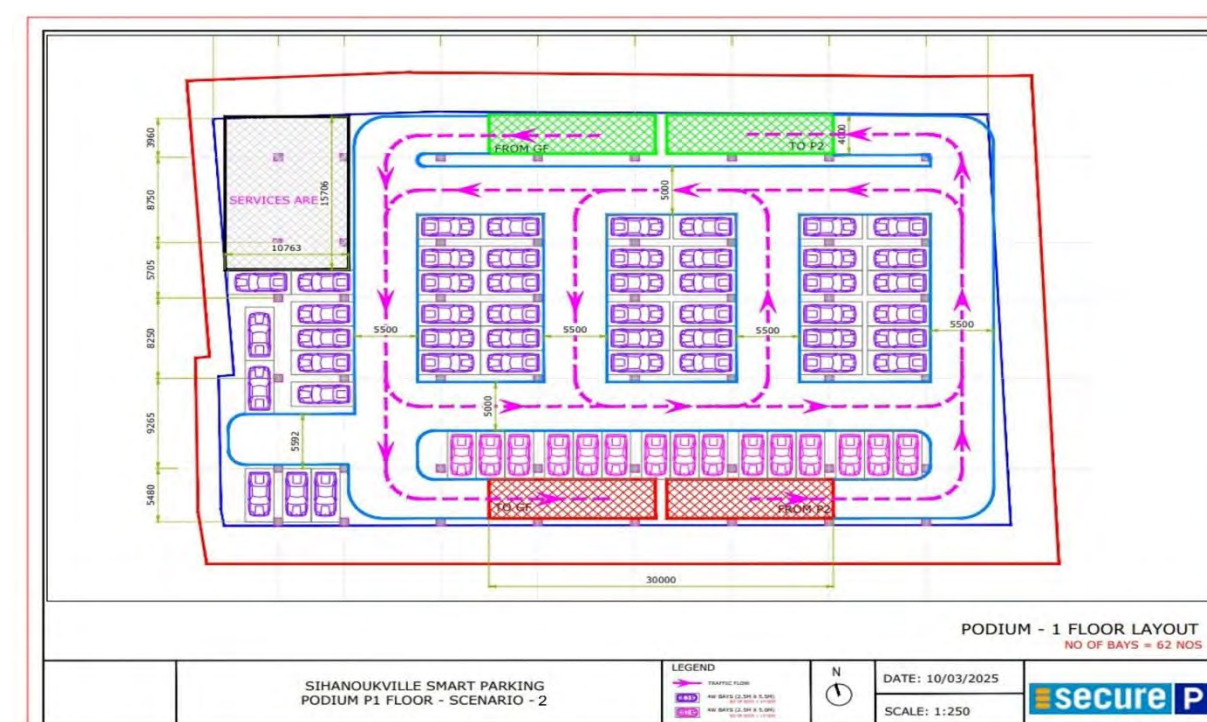
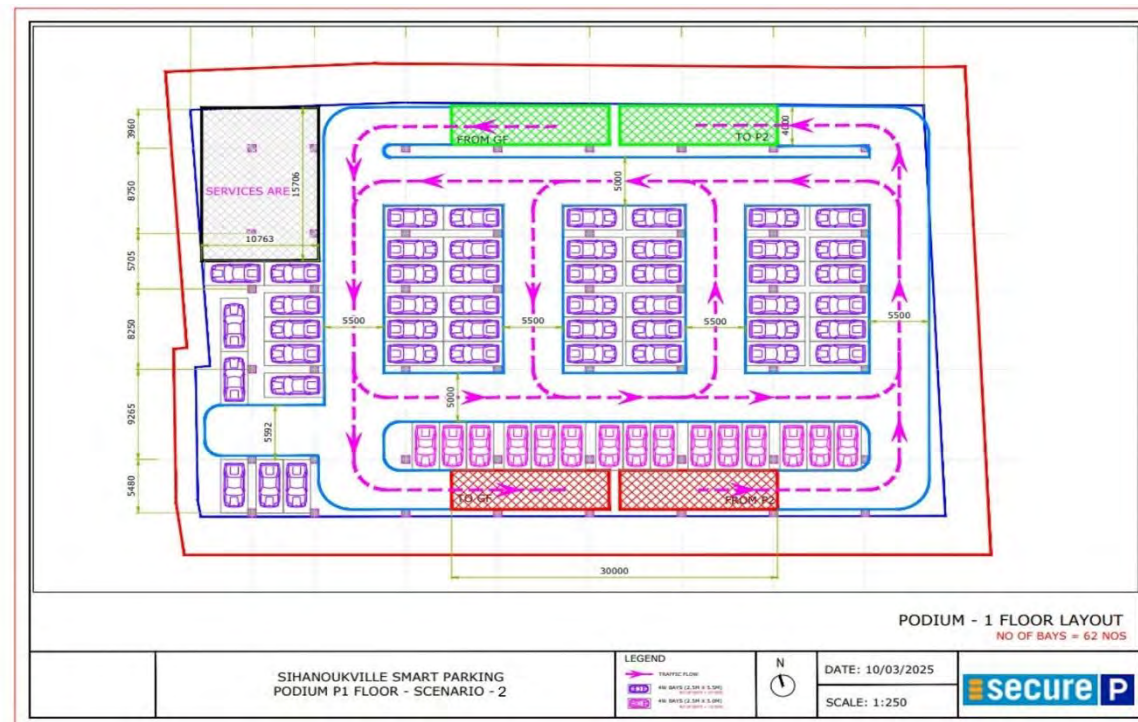
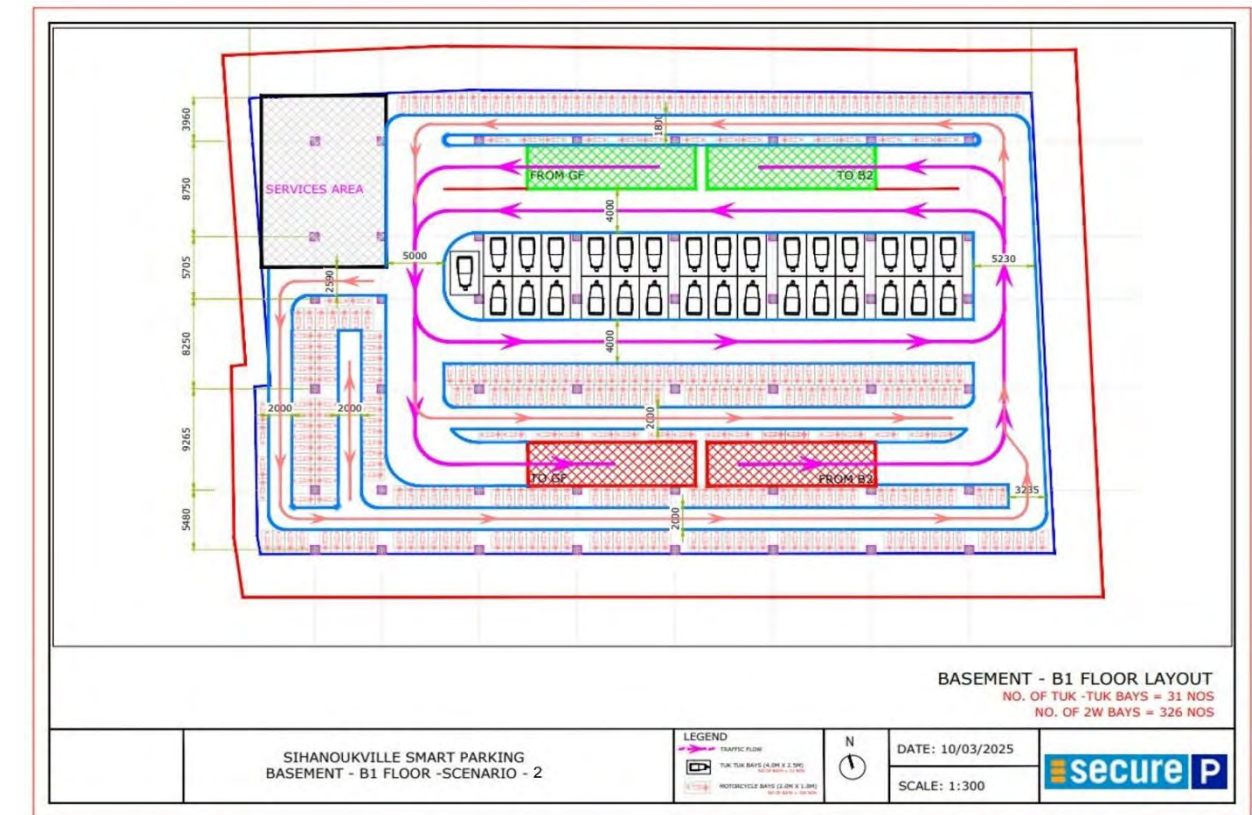
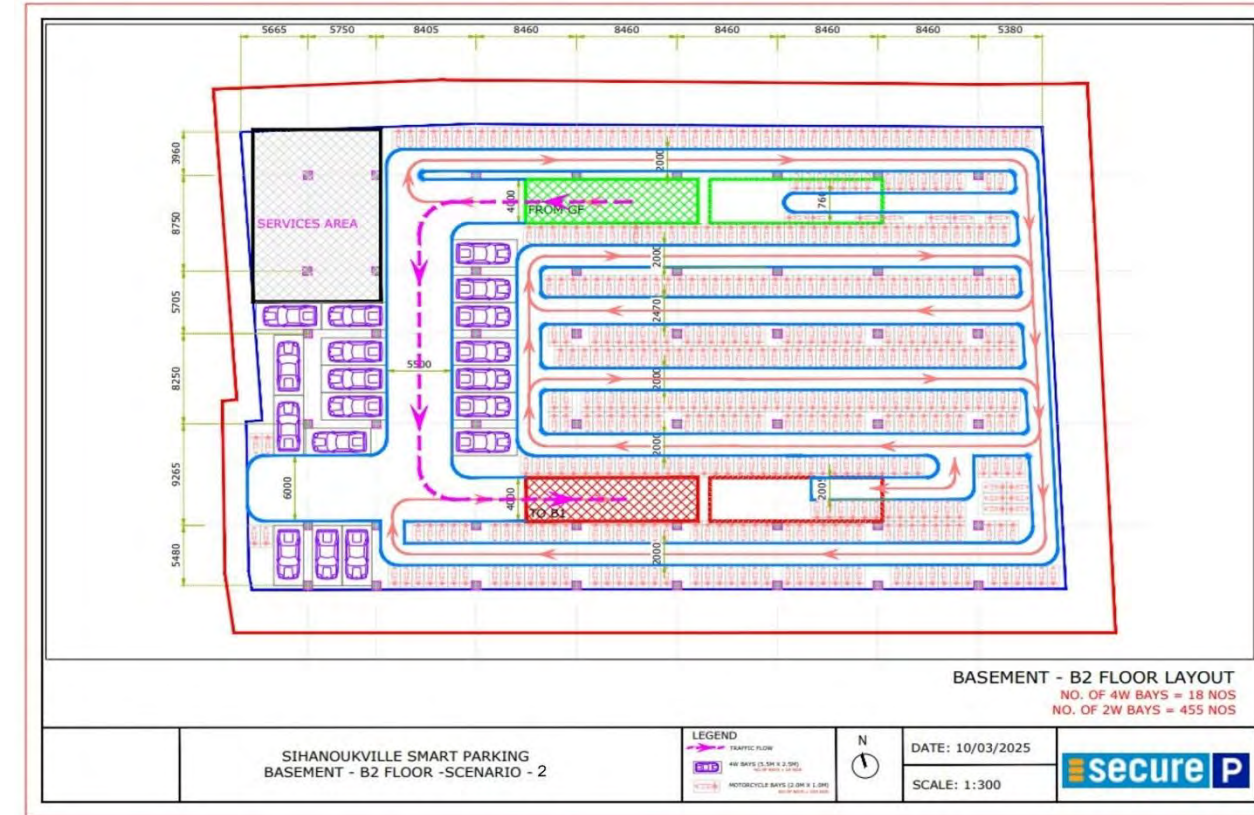
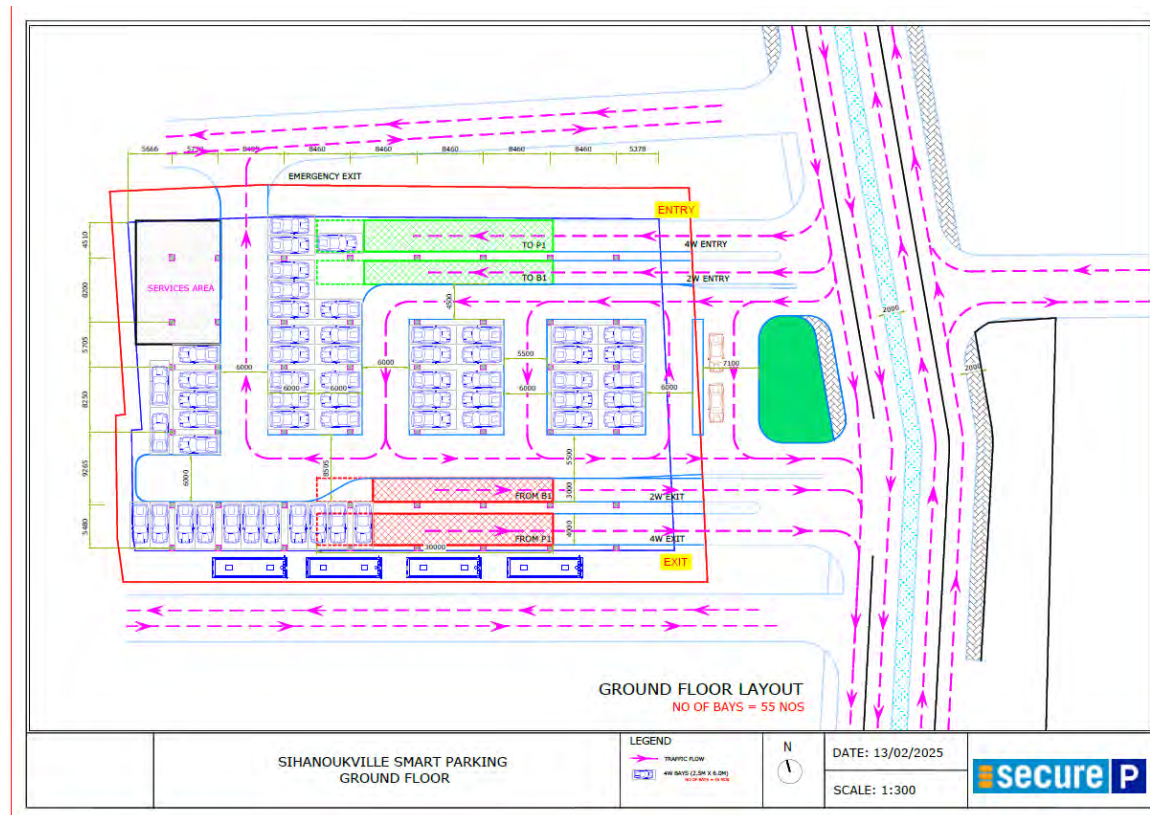


Stack parking

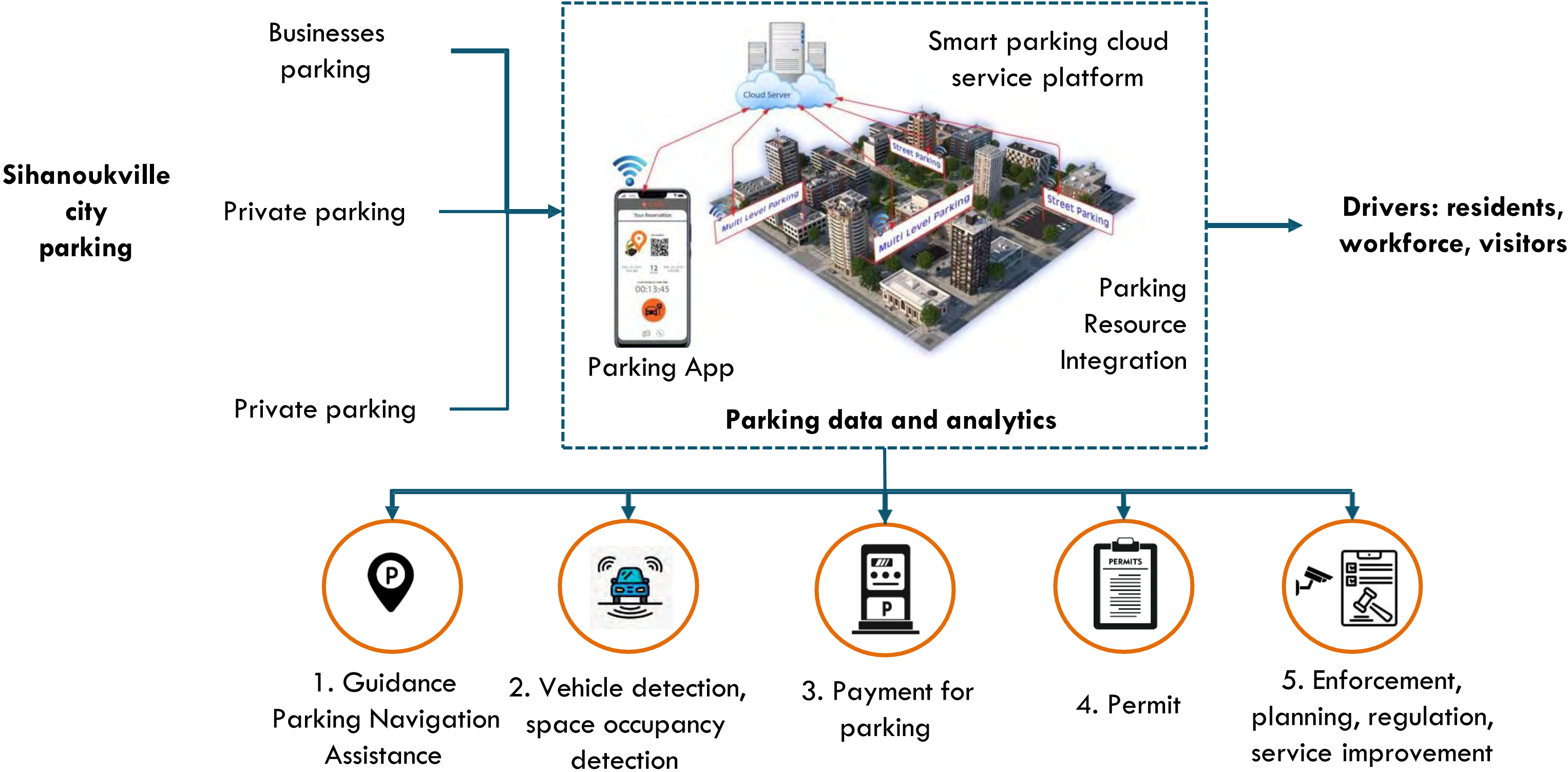


Conceptual layouts – Traffic Flow

Non-stack parking



SUMMARY SOLUTION FOR SMART PARKING



Recommended development options for Sihanoukville Smart Parking project

Recommended option:

Single-phased development: Non-stack parking (Option-2)
(12 floor facility: 6 floors for parking & 6 floors for commercial space)

1. Government Benefits:

Provides a 5% revenue share.
Fixed payment of USD 50,000 annually to the government.
No VGF required
.

2. Financial Viability:

Project IRR: 14%
Equity IRR: 18%
Payback period of 10 years

3. Value for Money:

- Estimated at USD 12 million

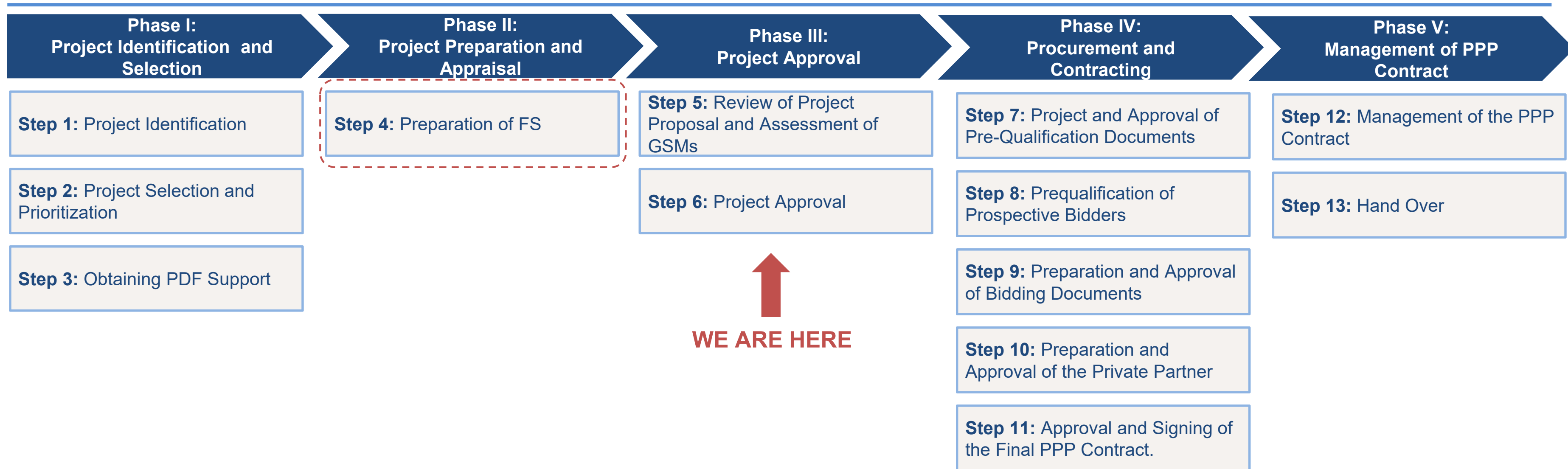
4. Parking Demand fulfilment (First Year of Operations - 2029):

4W Parking: 240 spaces, meeting 37% of the projected demand.
2W Parking: 1,100 spaces, meeting 93% of the projected demand.

Other key aspects:

- Offers balanced mix of parking and commercial spaces.
- Car parking floors extend until 4th floor from ground level, which is aligned to parking preferences outlined during market consultation
- Providing keys to operator for parking is not required
- Lesser training and technical knowhow required for staff
- Considering existing real estate market in Sihanoukville, the anticipated leasing of the commercial areas may not materialize as expected, which could affect the overall viability of the project.

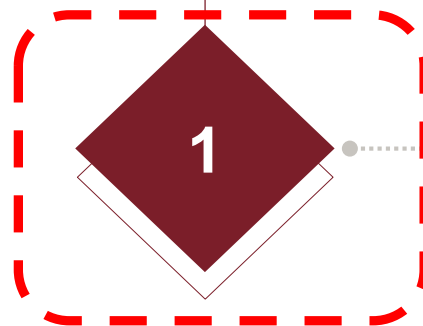
Public Private Partnership (PPP) Project Cycle



Progress of the Project

Phase-1 Feasibility assessment

Establish project feasibility taking into account technical, financial, market, environmental and social considerations



Phase-2 Bidding process until financial close

Draft PPP contract

Assist in contract negotiations and financial close

Preparation of bid documents and instruction to bidders

Bid process management and evaluation

CRISIL Limited was appointed by the Preah Sihanouk Provincial Administration (PSPA) in liaison with the General Department of Public Private Partnership (GDPP), Ministry of Economy and Finance (MEF) for this project



Way Forward and Suggestions

Way Forward

Sihanoukville City is being exposed to fast urban growth, we have to act now.

- **Identification of partnerships programme between Preah Sihanouk Administration, Development Partners, Agencies and international financial institutions;**
- **A need for mobilizing resources, including financial and technical, as well as investment;**
- **Implementation of initiatives on smart, inclusive, and sustainable cities at city administration, local communities;**
- **It is necessary to build capacity on smart city initiatives, ITC and others to provincial, cities and local officials as well as communities;**
- **Documentation of best practices are combined and disseminated.**

An aerial architectural rendering of a coastal city development. The scene shows a large body of water on the left, with a sandy beach and a cluster of buildings along the shoreline. A winding river or canal system flows through a lush green, hilly landscape. Several urban areas with dense building footprints are scattered across the terrain. On the right, there is a large, rectangular area that appears to be a port or industrial zone, with a small aircraft visible in the sky nearby. The overall atmosphere is bright and scenic, with soft lighting and a mix of natural and built environments.

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