

Figure 1 The approval procedure agreed in 1st JCC

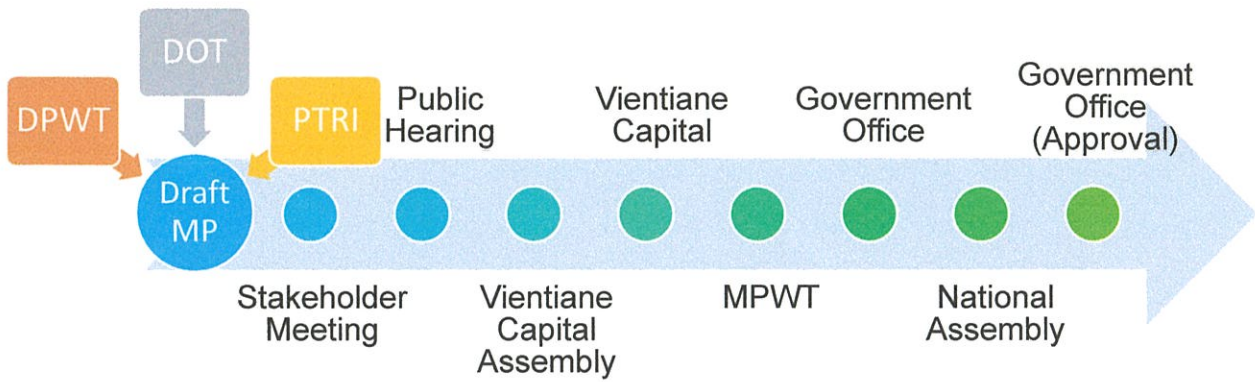
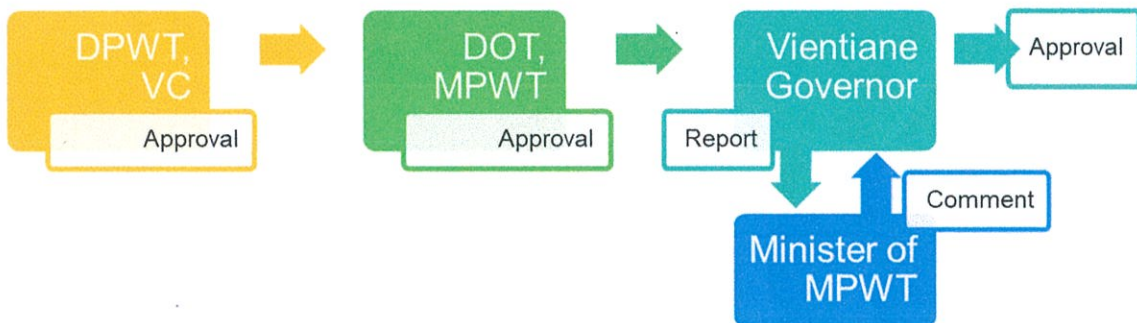


Figure 2 The approval procedure agreed in this JCC (6th)



Note: the submission for each step will be taken care by DPWT, Vientiane Capital

3. Congestion and Traffic Management Committee (CTMC) has not been held for the Project. However, sufficient discussions for urban transport issues and solutions were done through the JCC attended by several CTMC members. The JCC members shall continue to engage in active discussions periodically on the implementation of the action plan, updating the master plan as situations change, and solutions to new urban transportation issues that may arise.

4. PDM amendment

【Objectively Verifiable Indicators (OVI) for the Overall Goal】

4.	Before	Amended Version
	Urban traffic related indicators, bus passenger number, in Vientiane Capital improve by X% or more	Urban traffic related indicators, bus passenger number, in Vientiane Capital improve by 370% or more
	Reason: considering the proposed OVI, "bus passenger number", "X%" has been identified as follows: Base year: 2019 (100%) 270% as increment against the base year figure, which makes 370% in total.	

Annex 2: Project Design Matrix Version 6

MINUTES OF MEETING
THE SEVENTH JOINT COORDINATION COMMITTEE (JCC) MEETING
FOR
THE PROJECT FOR INSTITUTIONAL CAPACITY BUILDING FOR
SUSTAINABLE URBAN TRANSPORT SYSTEM
IN
LAO PEOPLE’S DEMOCRATIC REPUBLIC

The seventh JCC meeting of the Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People’s Democratic Republic (“the Project”) was held on 9th October 2023, attended by the representatives of Vientiane Capital, Department of Public Works and Transport (DPWT), Department of Transport (DOT), and Public Works and Transport Research Institute (PTRI) of the Ministry of Public Works and Transport (MPWT), Department of Traffic Police (DTP), National University of Laos (NUOL), Japan International Cooperation Agency (JICA) and the JICA Expert Team (JET).

The Lao side and Japanese side agreed on the minutes of the meeting as summarized below and in the Annexes.

9th October 2023 Vientiane, Laos

Mr. Noriyuki ITO
Senior Representative
JICA Laos Office

H.E Dr. Ath Saphangthong
SIPHANDONE
Governor of Vientiane Capital

Mr. Soulivanh PHOMMAHAXAY
Director General
Department of Public Works and
Transport, Vientiane Capital

Dr. Bounta ONNAVONG
Director General
Department of Transport,
Ministry of Public Works and Transport

Mr. Tatsuyuki Sakurai
Chief Advisor
The Project for Institutional Capacity
Building for Sustainable Urban
Transport System

1. Both sides reviewed the project activities, focusing on the Project Purposes, Outputs and Overall Goal, and agreed the following:
 - (i) Project Purpose 1 (Attendance of the counterpart (C/P) in the training sessions) and Project Purposes 2 (Understanding of the C/Ps on project implementation manual) were achieved while Project Purpose 3 (Approval of the Master Plan) is expected to be achieved within the Project period.
 - (ii) Output 1 (Establishment of mechanism of discussing and sharing the views on the issues of urban transport) was achieved since the main members of CTMC joined JCC and discussed the issues.
 - (iii) Output 2 (Urban transport Master Plan is formulated and training are offered to the C/Ps) was achieved: The Master Plan was formulated with 120 Working Group Meetings, 3 Technical Working Group Meetings, 8 SEA Sector-wide Stakeholder Meetings and 7 Joint Coordination Meetings.
 - (iv) Output 3 (Implementation of pilot projects) was achieved: More than 3 C/Ps played specific roles in the planning and implementation of the pilot projects and more than 18 C/Ps participated in the training on project implementation manual. On the other hand, the result of the implementation of the pilot project was partially achieved because minor reduction in travel speed was observed in a few cases while travel speed was substantially improved in the majority of the cases.
 - (v) Overall goal (Implementation of institutional measures and priority projects proposed in the Master Plan under the leadership of GOL): To be assessed in the Evaluation Project to be conducted in 3 years.

- The Lao side confirmed that the procedures of approving the Master Plan will be started soon after this (7th) JCC. The Lao side explained that endorsement of the Master Plan at the technical level can be completed by the end of November 2023, the final decision on the approval is subject to the leadership level (Minister of MPWT and Governor of Vientiane Capital).

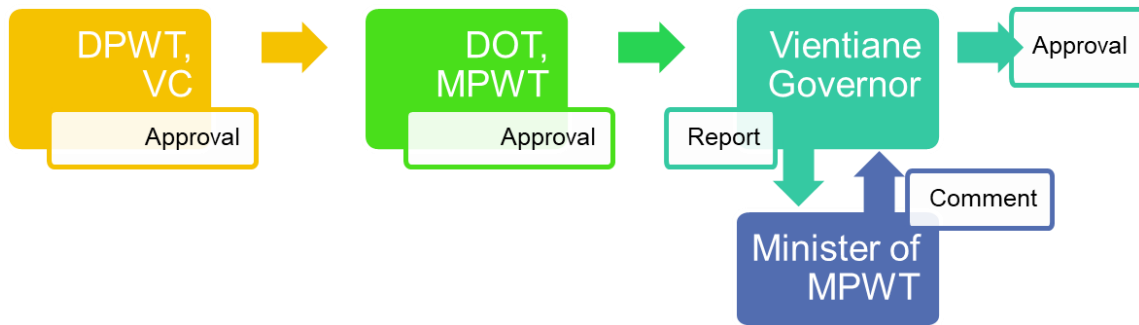


Figure 1 Approval Procedure Agreed in the 6th JCC

Note: the submission for each step will be taken care by DPWT, Vientiane Capital

- The Lao side stated that it is appropriate to convene meetings which supplement CTMC, such as meetings consisting with JCC members, twice a year or more in order to monitor the implementation of projects proposed in the Master Plan.
- The importance of traffic enforcement was discussed. The Governor of Vientiane Capital, as the Chairman of the JCC, stated that the Vientiane Capital has issued an order to the traffic police department to strengthen the enforcement of traffic rules.

Annex 1: Project Evaluation Result

PDM Evaluation (Objectively Verifiable Indicators)

Project Purpose
The capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane are upgraded, and their administrative and managing capacities for implementing urban transport policies from the MP are strengthened.
1. C/Ps who attended serial training sessions on urban transport MP formulation improve their understandings on the issues, and achieve over 70% on the post-training test scores. Achieved (76.0%)
2. C/Ps who attended training (s) on the project implementation manual improve their understandings, and achieve over 70% on the post-training test scores. Achieved (88.2%)
3. MPWT, DOT or any other relevant institution officially approves the urban transport MP and action plan ("any other relevant institution" which is responsible for approving the MP and action plan" to be identified, if any). Expected to be achieved within the Project period.
Output1
The mechanism for discussing and sharing the views on the issues of urban transport is established.
1. More than 3 issues identified during the initial stage of in the Project are discussed in the meetings of the Congestion and Traffic Management Committee (CTMC). JCC with CTMC members have discussed the issues: Achieved
2. More than 3 issues identified during the initial stage of in the Project and discussed in the meetings of the CTMC are dealt by related institutions with follow-up activities. The activities discussed in the JCC were carried out: Achieved
Output2
Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.
1. More than 70% of the C/Ps receive training on formulating the urban transport master plan. Achieved (75.3%)
2. An urban transport MP for Vientiane Capital is formulated by updating the year 2008 version. Achieved
3. An action plan is formulated to implement the contents of the master plan. Achieved
Output3
Pilot project(s) are implemented and the targeted issues are mitigated.
1. More than 3 C/Ps play specific roles in the planning and implementation of the pilot projects.

	Achieved
2. More than 70% of the C/Ps receive training on the project implementation manual.	Achieved (72.7%)
3. Urban traffic-related indicators improve on average travel speed +5 km/h in pilot project areas.	Partially Achieved

Overall Goal	
Institutional measures and priority projects proposed in the urban transport master plan are implemented in Vientiane Capital under the leadership of GOL.	
1. More than <u>3 projects</u> and/or policies proposed in the master plan are reflected in the annual plans of MPWT, DOT, or other related agencies with budget allocations.	
2. More than <u>2 projects</u> and/or policies proposed in the master plan are discussed and considered with donors for implementation.	
3. More than <u>5 projects</u> and/or policies proposed in the master plan are implemented (under implementation or completed).	
4. Urban traffic related indicator, bus passenger number, in Vientiane Capital improve by <u>370%</u> or more.	
5. The roles of “Steering Committee to Solve Congestion and Traffic-Management in Traffic Routes in the City of Vientiane Capital” (CTMC) are established and more than <u>2 issues</u> regarding the implementation of the master plan are discussed annually in the CTMC meetings.	

DAC Evaluation

Item	Evaluation
Relevance	Medium
Coherence	High
Effectiveness	Medium
Efficiency	Medium
Impact	Medium
Sustainability	Medium



The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

1st Joint Coordination Committee (JCC) Meeting

1st April 2019



JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



CONTENTS

1. Project Outline
2. Review of 2008 Urban Transport MP
3. Transportation Issues in Vientiane Capital
4. Project Activities
5. Project Design Matrix
6. Schedule

1. PROJECT OUTLINE

1. Overview of the Project

Overall Goal

Implementation of institutional measures and priority projects proposed in the urban transport MP in Vientiane Capital under the leadership of GOL

Project Purpose

- To upgrade the capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane Capital
- To strengthen their administrative and management capacities for implementing urban transport policies from the MP

1. PROJECT OUTLINE

1. Overview of the Project

Outputs

1. The mechanism for discussing and sharing the views on the issues of urban transport is established.
2. Urban transport MP is formulated and trainings (including OJT) are offered to counterparts for their capacity building
3. Pilot project(s) are implemented and the targeted issues are alleviated/mitigated.

Activities

1. Establishment of decision-making mechanism on urban transport
2. MP update and capacity development
3. Pilot project implementation

1. PROJECT OUTLINE

2. Target Area

Vientiane Capital, Lao PDR

Urban Planning Area:

62,000 ha

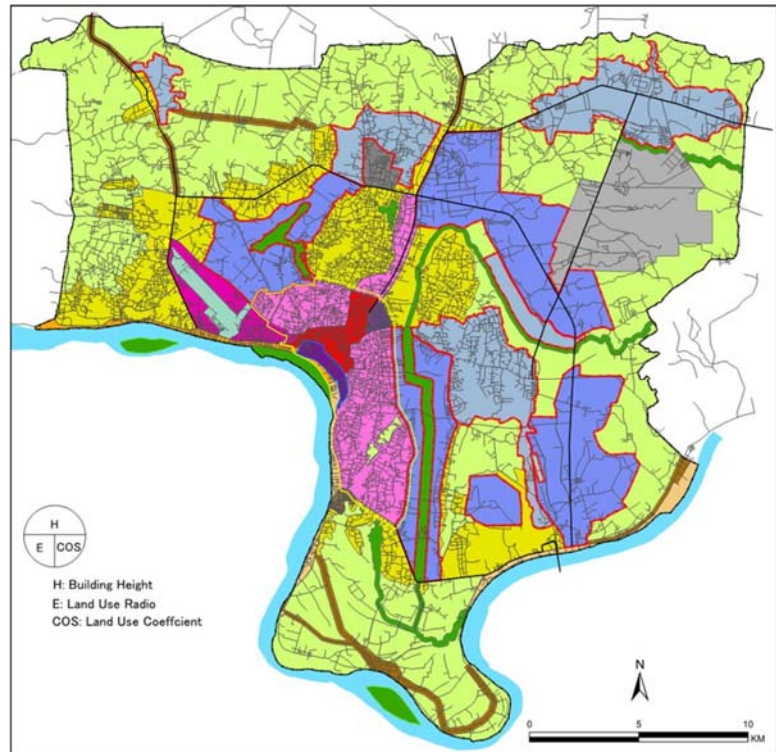
Population:

Approx. 820,940 people
(2015 Census)

3. Project Period

From December 2018
to December 2021

(3 years)



The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

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1. PROJECT OUTLINE

4. JICA Expert Team (JET)

	Position	Name
1	Chief Advisor / Transportation Policy / Organization	Mr. Tatsuyuki SAKURAI
2	Deputy Chief Advisor/ Transportation Policy/ Organization	Mr. Keisuke TAKEDA
3	Urban Transport Plan	Mr. Masato WATANABE
4	Socio-Economic Analysis	Ms. Andra MIJARES
5	Road Network Plan/ Traffic Management Plan	Mr. Hiroshi WARITA
		Mr. Kurato ENDO
6	Public Transport Plan	Mr. Naoki MURAYAMA
7	Traffic Survey/ Traffic Demand Forecast 1	Mr. Yoshiyuki ARITA
8	Traffic Survey/ Traffic Demand Forecast 2	Mr. Masato WATANABE
9	Geospatial Analysis (GIS)	Ms. Kayoko MIYAO
10	Financial Analysis / Investment Plan	Mr. Teruaki TANAKA
11	Environmental and Social Considerations	Mr. Takanori HAYASHIDA
12	Pilot Project Plan/ Implementation Supervision	Mr. Kongkeo PHAMAVANH
		Mr. Makoto NOZAWA
13	Safety Management / Traffic Facilities / IoT	Mr. Makoto NOZAWA
14	Urban Development/ Land Use Plan/ Legislation System	Mr. Jun KUWABARA
15	Capacity Dev't Plan/ Training Mgmt./ Institutional Assessment	Mr. Makoto TANAKA
16	Monitoring/ Evaluation	Ms. Junko TAGUCHI
17	Project Coordinator/ Traffic Demand Forecast Support	Mr. Isaac GARCIA

The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

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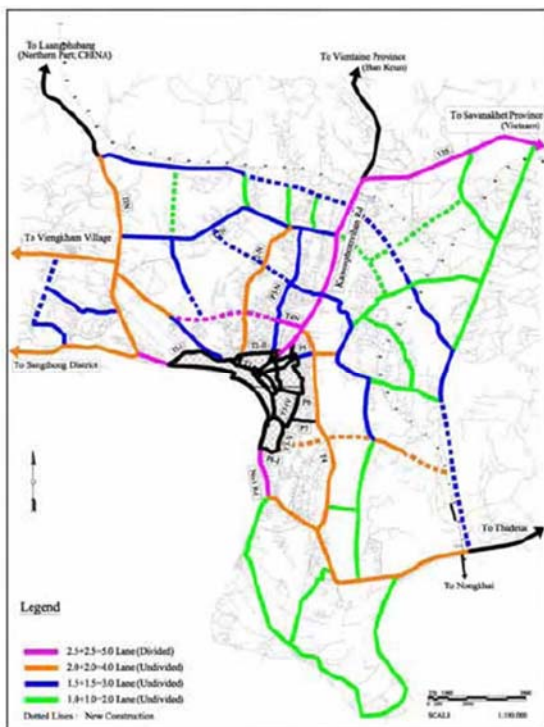
1. PROJECT OUTLINE

5. Counterparts

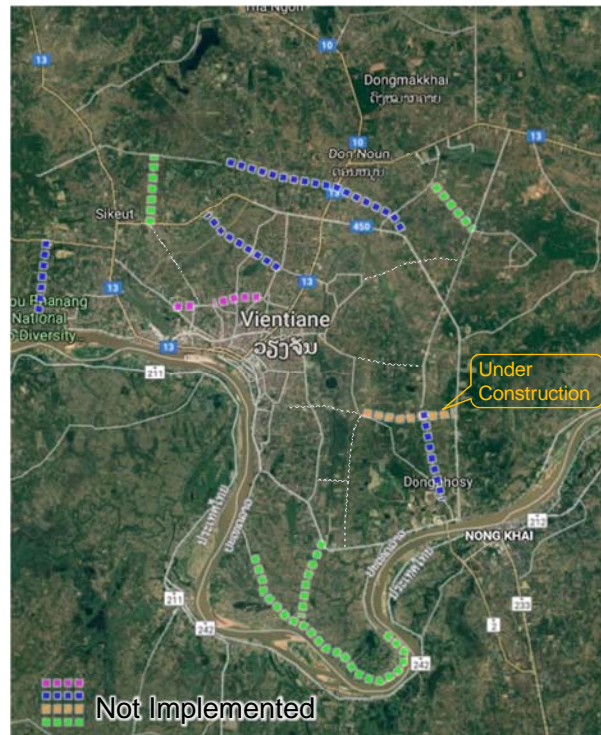
	Name and Surname	Position	Organization
1	Ms. Souphany HEUANGKEO	Deputy Director	DOT, MPWT
2	Mr. Dethmany OUNSOUVANH	Deputy Director	DOT, MPWT
3	Ms. Vandavone KITTAVONG	Technical Staff	DOT, MPWT
4	Mr. Phouthavanh PHOMMACHACK	Technical Staff	DOT, MPWT
5	Mr. Khamphonemixay PHOMMATHAT	Deputy Director	PTRI, MPWT
6	Mr. Maikhen VANHEUANG	Technical Staff	PTRI, MPWT
7	Mr. Soulavanh KHAMPHITHOUN	Technical Staff	PTRI, MPWT
8	Mr. Lamkhar SAIYASAN	Deputy Director	DPWT, VC
9	Mr. Baengchan PHOUMMACHAN	Head of Transport Development Unit	DPWT, VC
10	Ms. Yard Aloun KEOPHILAVONG	Vice Head of Transport Development Unit	DPWT, VC
11	Mr. Ath NAOVALANGSY	Technical Staff	DPWT, VC
12	Lieutenant Colonel Phengsavanh THAMMABOON	Director General	Traffic Police
13	Lieutenant Colonel Bounmark SOUNDALAI	Deputy Director General	Traffic Police
14	Major Sungkhom PHOMMALATH	Deputy Director General	Traffic Police
15	Major Xayoudom SOUTHAMMAVONG	Head of Traffic Police Unit	Traffic Police
16	Major Phetdaohueang SENGMANY	Head of National Road Police Unit	Traffic Police
17	Mr. Phongsavanh INTHAVONGSA	Lecturer	NUOL
18	Mr. Anousone OUTHAILATHSADY	Lecturer	NUOL
19	Dr. Anousack THAMMAVONG	Lecturer	NUOL
20	Ms. Chandavone THAMMAVONG	Technical Staff	NUOL
21	Ms. Phoutmena CHANTHANASIN	Technical Staff	NUOL

2. Review of 2008 Urban Transport MP

1-1. Proposed Road Network



1-2. Current Road Network



2. Review of 2008 Urban Transport MP

2-2. Proposed Bus Network



2-2. Current Bus Network



The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

3. TRANSPORTATION ISSUES IN VC

Transportation Issues in Vientiane Capital

Traffic Congestion



Excessive Traffic Demand



Mixing of Car and Motorcycle Traffic



Insufficient Intersection Capacity



Illegal Roadside Parking



Inefficient Intersection Control

The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

3. TRANSPORTATION ISSUES IN VC

Transportation Issues in Vientiane Capital

Public Transport



Low Level of Service of Buses



Low Level of Service of Taxis and Paratransit

Road Safety



Increasing Traffic Accidents



Poor Pedestrian Safety

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3. TRANSPORTATION ISSUES IN VC

Urban Transport-Related Administrative Issues

Organizational Issues

Formulation and Approval of Plans

- Process for the discussion of urban transport-related issues and for the formulation and approval of plans is established
- Department or office in charge of planning is unclear

Project Implementation

- Projects not being implemented according to plan

Technical Issues

Planning Capability / Technical Skills

- Improvement on planning capabilities
- Improvement on technical skills
- Upgrading capacity of technical personnel

Implementation Capacity

- Capacity for identifying and analyzing the traffic/transportation problems
- Capacity for implementing countermeasures

Tools

- Lack of computers, software, research equipment, etc.

3. TRANSPORTATION ISSUES IN VC

Urban Transport Planning Issues

Update of Urban Transport MP incorporating relevant development plans and Project Outcomes

- Adjustment of the parts to be used and those to be revised
- Organization of tasks and lessons learned from the MPs
- Distribution of development concentration, emphasis on historical preservation and urban design

Technology Transfer

- Efficient technical cooperation
- Creation of a path towards the ownership of the Lao side
- Preparation of manuals
- Implementation of capacity development measures

Transport Policy

- Adherence to Vientiane's development vision, development scenario and fundamental policy of updated urban transport MP
- Demand-dependent type of problem-solving

Other Ongoing Projects

- Consistency with other projects

Procedure of MP Approval

- Confirmation of procedure for the official approval of the urban transport MP by the relevant institution/s on the Lao side

4. ACTIVITIES

Activity 1: Establishment of Decision-Making Mechanism on Urban Transport

[Output 1] Establishment of Mechanism for Discussing and Sharing Views on Urban Transport Issues

1-1. A subcommittee comprised of the representatives of the institutions relevant to urban transport system is established under CTMC.

1-2. Support the activities of CTMC:

1-2-1. Discussion and decision-making on the technical, administrative and institutional issues of urban transport

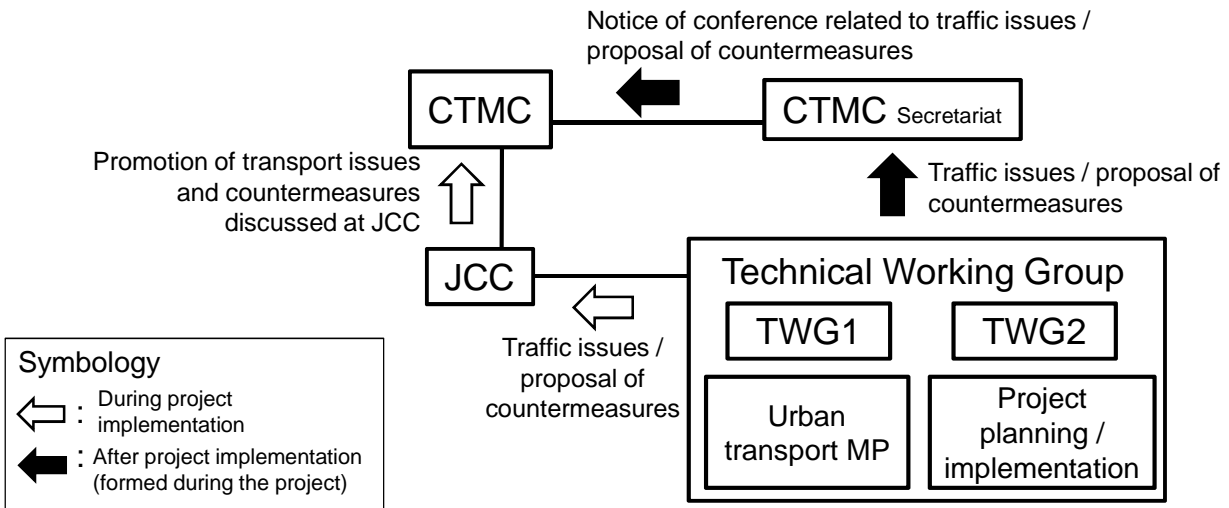
1-2-2. Informing the relevant institutions of the results of the discussions and required actions

1-2-3. Monitoring the progress of the required actions implemented by the relevant institutions

4. ACTIVITIES

Activity 1-1. Establishment of Technical Working Group

- Counterparts and Project team work together in the TWG and report transportation issues to JCC.
- JCC reports the result of discussion to CTMC and CTMC makes decision for next action.



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4. ACTIVITIES

Activity 2: MP Update and Capacity Development

[Output 2] Formulation of Urban Transport MP and Offering Trainings (including OJT) to CP for their Capacity Building

- 2-1. Existing capacities of relevant institutions for urban transport planning are assessed and the areas which need to be enhanced are identified.
- 2-2. Capacity development plan for urban transport planning is prepared.
- 2-3. Training plan is implemented and the effect of the training courses is evaluated.
- 2-4. A manual for urban transport planning (MP formulation) is prepared through the process of updating the MP.
- 2-5. Current situation of urban transport of Vientiane Capital is analyzed (studied) and the issues are identified.
- 2-6. Projects relevant to the urban transport system of Vientiane, including the public transport projects such as BRT project and the project for improvement of bus services, are reviewed.
- 2-7. Contents of the transport masterplan of the year 2008 are updated.
- 2-8. An action plan is prepared to realize the contents of the masterplan.

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4. ACTIVITIES

Activity 2-1: Capacity Assessment

Several types of survey as shown below will be carried out in the beginning of the project.

1. Take a questionnaire to several classes of officers.
2. Interview senior management officers about organizational issue.
3. Test on expertise of each department.

Activity 2-3: Implementation of capacity development training plan

		Contents
OJT		Work together with JICA Project team on developing MP, Planning and implementing Pilot Projects.
Off-JT	Training in Japan	Learn public transportation system in Japan.
	Training in Laos	Contents will be determined based on the result of Capacity Assessment.

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4. ACTIVITIES

Activity 2-3: Implementation of capacity development training plan

Topic	Subtopic	Participating organizations				
		MPWT	DPWT	PTRI	VCSBE	Police
Traffic demand forecast	Traffic surveys and PT survey necessary for formulation of MP	○	○	○		
	Four-step forecasting method and STRADA	○	○	○		
Traffic management/ operation plan	Traffic regulation that contributes to elimination of congestion, demand control measures	○	○			○
	Fundamentals and advanced sophistication of signal control	○	○			○
	Traffic control that contributes to traffic safety and mitigation of traffic congestion					○
Transport facility planning	Effect of installing lane dedicated to buses				○	○
	Evaluation of the quantitative effect of intersection improvement (structural improvements)	○	○	○		
	Evaluation of the quantitative effect of intersection improvement (non-structural improvements)	○	○	○		
	Bus stops, sidewalks, station squares	○	○		○	○
Budget measures and negotiation	Screening investment plans, drafting budget drafts, budget negotiation	○	○			
Financial analysis, accumulation, investment planning	Financial analysis, future forecast, ability to formulate investment plan				○	○
	Prediction of transport sharing ratio, promotion of public transport	○				
Traffic in general	Transport project plan		○		○	
	Environmental impact forecast	○	○	○		
	Economic analysis and business evaluation	○				
Others	Geographic Information System (GIS)	○		○		
	※Participants from Laos University will also be considered according to the topic.					

The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

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4. ACTIVITIES

Activity 3: Pilot Project Implementation

[Output 3] Implementation of Pilot Projects and Mitigation of Targeted Issues

- 3-1. Pilot projects #1 and #2 are selected.
- 3-2. Implementation plan of the pilot projects #1 and #2 , including design, is prepared.
- 3-3. Outline of the pilot projects #1 and #2 is explained to the stakeholders and their consensus is obtained.
- 3-4. Pilot projects #1 and #2 are implemented.
- 3-5. The results of implementing the pilot projects #1 and #2 are evaluated.
- 3-6. A manual for project implementation is prepared through the process of implementation of the pilot projects #1 and #2 .
- 3-7. Training on the project implementation manual is provided to institution staff who will be involved in the implementation of the action plan proposed in the updated MP.

4. ACTIVITIES

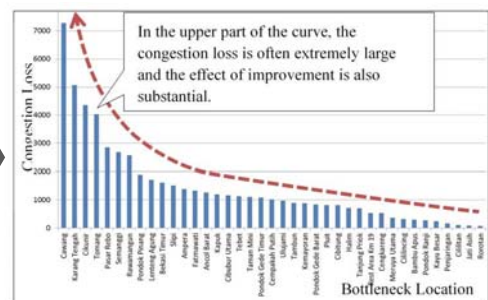
Activity 3-1: Selection of Pilot Projects #1 and #2

Pilot Project	Type of Project (Proposed)	Subcontractor
#1	Immediate action against traffic congestion (ex. intersection improvement)	Local consultant
#2	Improvement with advancement technology (ex. traffic signal control system)	Local consultant + Japanese company

Identification of bottlenecks and estimating congestion loss using Google Maps traffic information *(Example in Vientiane)*



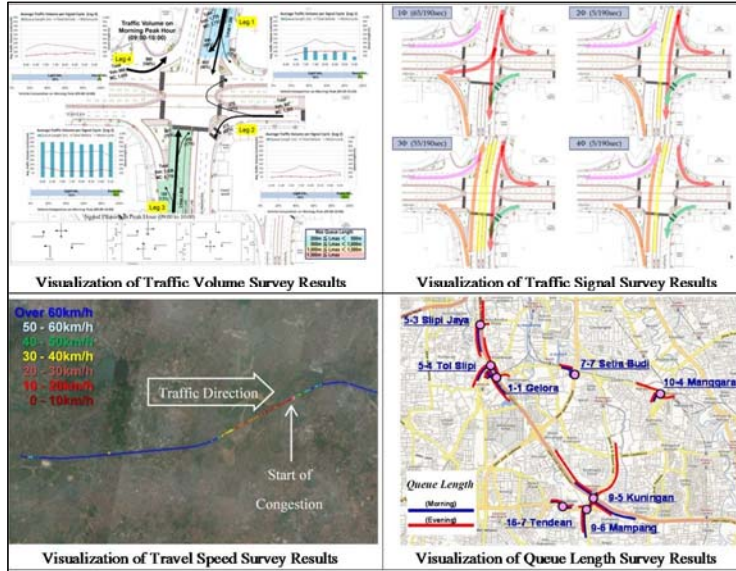
Selection of pilot project location/s based on bottleneck priority *(Example in Jakarta)*



4. ACTIVITIES

Activity 3-2: Implementation Plan (including Design) of Pilot Projects #1 and #2

Conducting traffic surveys and visualizing their results (Example in Jakarta)



Visual observation from a high location (Example in Vientiane)



Aerial shooting using a drone (Example in Vientiane)



5. PROJECT DESIGN MATRIX

【Overall Goal】 Institutional measures and priority projects proposed in the urban transport masterplan (MP) are implemented in Vientiane Capital under the leadership of GOL.

1. More than X projects and/or policies proposed in the MP are reflected in the annual plans of MPWT, DOT, or other related agencies with budget allocations
2. More than X projects and/or policies proposed in the MP are under discussion with donors for implementation
3. More than X projects and/or policies proposed in the MP are realized (under implementation or completed)
4. Urban traffic-related indicators in Vientiane Capital improve by X% or more
5. The roles of CTMC are established and more than X issues regarding the implementation of the masterplan are discussed annually in the CTMC meetings

(X: to be identified by the first 6 months in the final project year)

5. PROJECT DESIGN MATRIX

【Project Purpose】 The capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane are upgraded, and their administrative and managing capacities for implementing urban transport policies from the MP are strengthened.

1. C/Ps who attended serial training sessions on urban transport MP formulation improve their understandings on the issues, and achieve over X% on the post-training test scores
2. C/Ps who attended training (s) on the project implementation manual improve their understandings, and achieve over X% on the post-training test scores
3. MPWT, DOT or any other relevant institution officially approves the urban transport MP and action plan ("any other relevant institution" which is responsible for approving the MP and action plan" to be identified, if any).

(X: to be identified after baseline study)

【Output 1】 The mechanism for discussing and sharing the views on the issues of urban transport is established.

1. More than X issues identified during the initial stage of in the Project are discussed in the meetings of the CTMC
2. More than X issues identified during the initial stage of in the Project and discussed in the meetings of the CTMC are dealt by related institutions with follow-up activities

(X: to be identified by the 2nd JCC)

5. PROJECT DESIGN MATRIX

【Output 2】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

1. More than X C/Ps receive training on formulating the urban transport MP
2. An urban transport MP for Vientiane Capital is formulated by updating the year 2008 version.

(X: to be identified by the 2nd JCC)

【Output 3】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

1. More than X C/Ps play specific roles in the planning and implementation of the pilot projects
(X: to be identified when the pilot project is decided)
2. More than X C/Ps receive training on the project implementation manual *(X: to be identified by the 1st JCC)*
3. Urban traffic-related indicators improve on average by X% in pilot project areas ("urban traffic-related indicators" and X: to be identified when the pilot project is decided).

6. SCHEDULE

Tasks		2019												2020												2021											
		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Overall Activities	0-0 Overall Activities / Other Activities																																				
	0-1 Advance preparation (work in Japan)	□																																			
	0-2 Explanation/consultation regarding IC/R	■																																			
	0-3 Monitoring	■																																			
	0-4 Setting Indicators for PDM	■																																			
	0-5 Holding JCC meetings	■																																			
	0-6 Training in Japan	■																																			
	0-7 Traffic surveys, traffic demand forecast, database on development information	■																																			
	0-8 Holding public information seminars	■																																			
	0-9 PR activities	■																																			
0-10 Preparation of work completion report	■																																				
Output 1	1-1 A subcommittee comprised of the representatives of the institutions relevant to urban transport system is established under CTMC.	■																																			
	1-2 Support the activities of CTMC as listed below:																																				
	1-2-1 Discussion and decision-making on the technical, administrative and institutional issues of urban transport	■																																			
	1-2-2 Informing the relevant institutions of the results of the discussions and required actions.	■																																			
	1-2-3 Monitoring of progress of the required actions implemented by the relevant institutions.	■																																			

6. SCHEDULE

Tasks		2019												2020												2021											
		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Output 2	2-1 Existing capacities of relevant institutions for urban transport planning are assessed and the areas which need to be enhanced are identified.	■																																			
	2-2 Capacity development plan for urban transport planning is prepared.	■																																			
	2-3 Training plan is implemented and the effect of the training courses is evaluated.	■																																			
	2-4 A manual for urban transport planning (MP formulation) is prepared through the process of updating the MP.	■																																			
	2-5 Current situation of urban transport of Vientiane Capital is analyzed (studied) and the issues are identified.	■																																			
	2-6 Projects relevant to the urban transport system of Vientiane are reviewed.	■																																			
	2-7 Contents of the urban transport MP of the year 2008 are updated.	■																																			
	2-8 An action plan is prepared to realize the contents of the MP.	■																																			

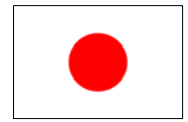
Discussion

Counterparts assignment

- In order to be effective capacity development, it is important that proper organizations are assigned to the proper phase of the project intensively based on the role of each organization in the future MP update.

Fields in the future MP update	Organization	Person in charge
Transportation Policy	Ex. DOT, MPWT	Xxxx Xxxxxx
Urban Transport Plan	DPWT	Xxxx Xxxxxx
Socio-Economic Analysis	PTRI, MPWT	Xxxx Xxxxxx
Road Network Plan		
Traffic Management Plan		
Public Transport Plan		
Traffic Survey/Traffic Demand Forecast		
Geospatial Analysis (GIS)		
Financial Analysis/Investment Plan		
Environmental and Social Considerations		
• • and so on		

To be filled



The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

2nd Joint Coordination Committee (JCC) Meeting

27th September 2019

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



CONTENTS

1. Overview of the Project
2. WG Establishment
3. Amendment on Target Area
4. Project Activities
5. Report from the Bus Project
“Social Experiment on Bus Priority Signal Control”
6. Schedule
7. Project Design Matrix
8. Discussion

1. Overview of the Project

1. Project Framework

Overall Goal

Implementation of institutional measures and priority projects proposed in the urban transport MP in Vientiane Capital under the leadership of GOL

Project Purpose

- To upgrade the capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane Capital
- To strengthen their administrative and management capacities for implementing urban transport policies from the MP

1. Overview of the Project

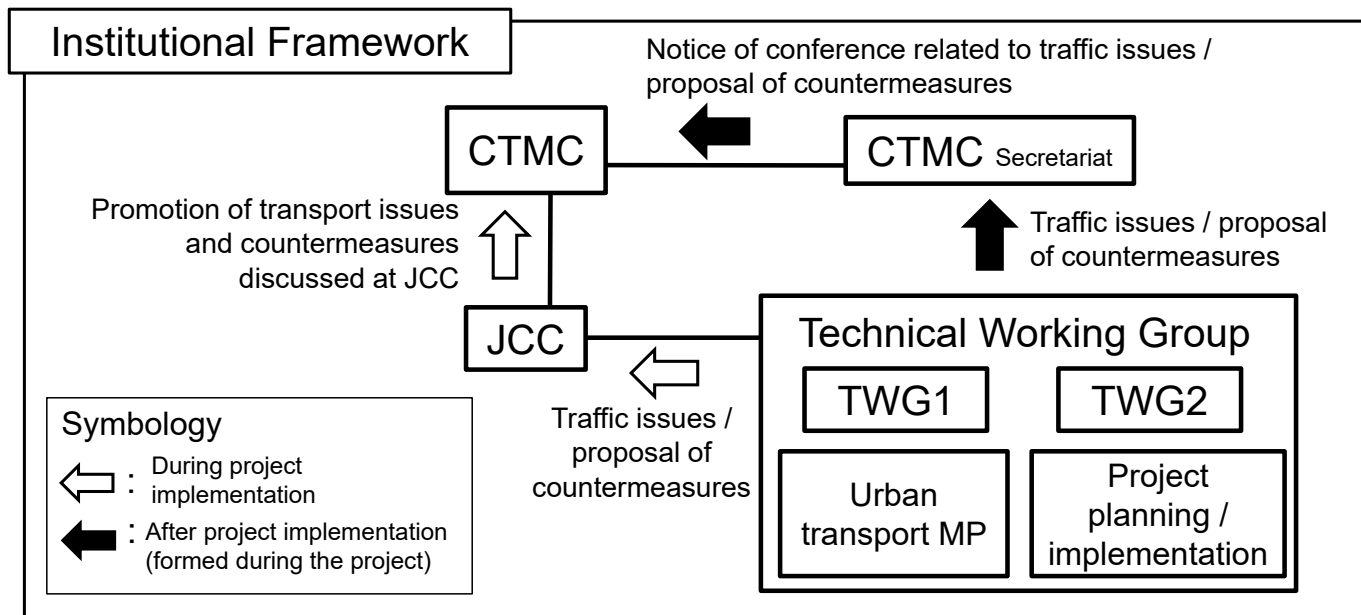
1. Project Framework

Outputs

1. The mechanism for discussing and sharing the views on the issues of urban transport is established.
2. Urban transport MP is formulated and trainings (including OJT) are offered to counterparts for their capacity building
3. Pilot project(s) are implemented and the targeted issues are alleviated/mitigated.

1. Overview of the Project

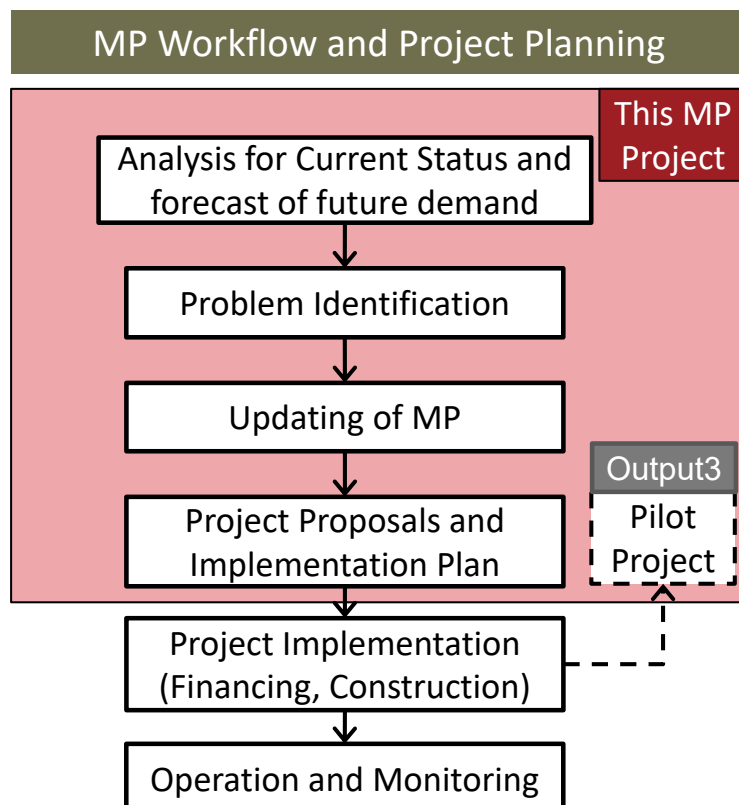
Activities for “Strengthen Institutional Capacity”



- Counterparts and Project team work together in the TWG and report transportation issues to JCC.
- **JCC reports the result of discussion to CTMC and CTMC makes decision for next action.**

1. Overview of the Project

Activities for “MP Update and Capacity Development ”



Urban Transport Master Plan project is;

- Analysis of current transport situation and forecast of the future traffic demand,
- Identification of existing and future problems,
- Proposal of optimal urban transport system (update) including public transport, road network, and traffic management,
- Proposal of countermeasures (projects) and implementation plan.
- Proposal and implementation of pilot projects.

1. Overview of the Project

Activities for “Pilot Project #1 and #2”

- Two pilot projects will be carried out in this project.
- Pilot Project #1 is aiming to tackle with traffic issues in Vientiane capital and that could be considered to be resolved with small-scale countermeasures and it expected to be implemented in short-term.
- On the other hands, Pilot Project #2 is for mid-term or long-term issues and this study will be undertaken in the second half of this project.

2. WG Establishment

Working Group Establishment

Technical Working Group which consists of group 1 to 12 was established and CPs were assigned to each working groups. CPs and JICA experts have started working in each group.



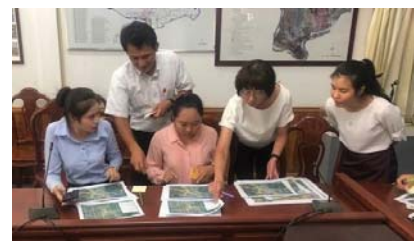
1st Technical Working Group Meeting



Site Survey



Workshop and Lecture



Hands-on Session

2. WG Establishment

Areas of Responsibility	Group		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	
			Transportation Policy / Organization	Urban Transport Plan	Public Transport Plan	Road Network Plan / Traffic Management Plan	Traffic Survey / Traffic Demand Forecast	Socio-Economic Analysis	Financial Analysis / Investment Plan	Geospatial Analysis (GIS) / Database	Environmental and Social Considerations	Urban Development / Land Use Plan / Legislation System	Pilot Project Plan / Implementation Supervision	Safety Management / Traffic Facilities / IoT	
	JICA Expert	Main Sub	Takeda M. Tanaka	Watanabe Murayama	Murayama Watanabe	Warita Endo	Arita Endo	Andra T.Tanaka	T.Tanaka Andra	Miyao Arita	Hayashida Isaac	Kuwabara Miyao	Nozawa Warita	Nozawa Warita	
	CP	Leader	Lamkhar	Lamkhar	Bengchanh	Lamkhar	Ath	Bengchanh	YardAloun	YardAloun	YardAloun	Ath	Bengchanh	Ath	
		Member	Souphany	Souphany	Souphany	Dethmany	Dethmany	Bengchanh	Vandavone	Khamphon emixay	Maikhen	Khamphon emixay	Bengchanh	Dethmany	
			Lamkhar	Lamkhar	Bengchanh	Lamkhar	Ath	Soulavanh	YardAloun	YardAloun	YardAloun	Maikhen	Phouthavanh	Ath	
			Phouthavanh	Anousone	Phongsavanh	Phoutmina	Anousone	Vandavone	Soulavanh	Chandavone	Chandavone	Anousone	Ath	Bounmark	Chandavone
			-	Bounmark	Phengsavanh	Phengsavanh	Anousak	-	-	-	Phoutmina	-	Soulavanh	-	Sangkhom
			-	Khamphon emixay	Sangkhom	Phetdaohe uang	-	-	-	-	Maikhen	-	-	-	-
			-	-	-	Sayoudom	-	-	-	-	Soulavanh	-	-	-	-
0	TWG 1		●	○	○	○	○	○	○	○	○	○	○	○	
	TWG 2		○	○	○	○	○	○	○	○	○	○	○	○	
1	Transportation Policy / Organization		●	○	○	○	○	○	○	○	○	○	○	○	
2	Urban Transport Plan		○	●	○	○	○	○	○	○	○	○	○	○	
3	Public Transport Plan		○	○	●	○	○	○	○	○	○	○	○	○	
4	Road Network Plan		○	○	○	●	○	○	○	○	○	○	○	○	
	Traffic Management Plan		○	○	○	●	○	○	○	○	○	○	○	○	
5	Traffic Survey		○	○	○	○	●	○	○	○	○	○	○	○	
	Traffic Demand Forecast		○	○	○	○	●	○	○	○	○	○	○	○	
6	Socio-Economic Analysis		○	○	○	○	○	●	○	○	○	○	○	○	
7	Financial Analysis / Investment Plan		○	○	○	○	○	○	●	○	○	○	○	○	
8	Geospatial Analysis (GIS) / Database		○	○	○	○	○	○	○	○	○	○	○	○	
9	Environmental and Social Considerations		○	○	○	○	○	○	○	○	○	○	○	○	
10	Urban Development / Land Use Plan / Legislation System		○	○	○	○	○	○	○	○	○	○	○	○	
11	Pilot Project Plan / Implementation Supervision		○	○	○	○	○	○	○	○	○	○	○	○	
12	Safety Management / Traffic Facilities / IoT		○	○	○	○	○	○	○	○	○	○	○	○	

●: Working (Target capacity to be developed)
○: Take part in meeting/discussion when invited

3. Amendment on Target Area

Current Target Area

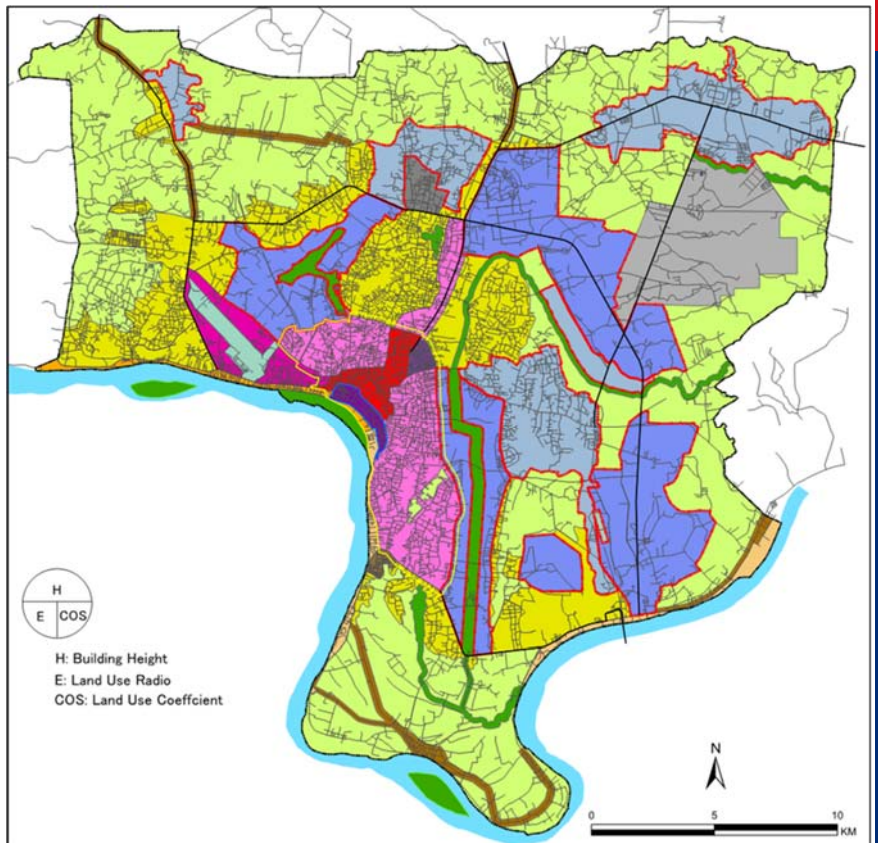
Vientiane Capital, Lao PDR

Urban Planning Area:

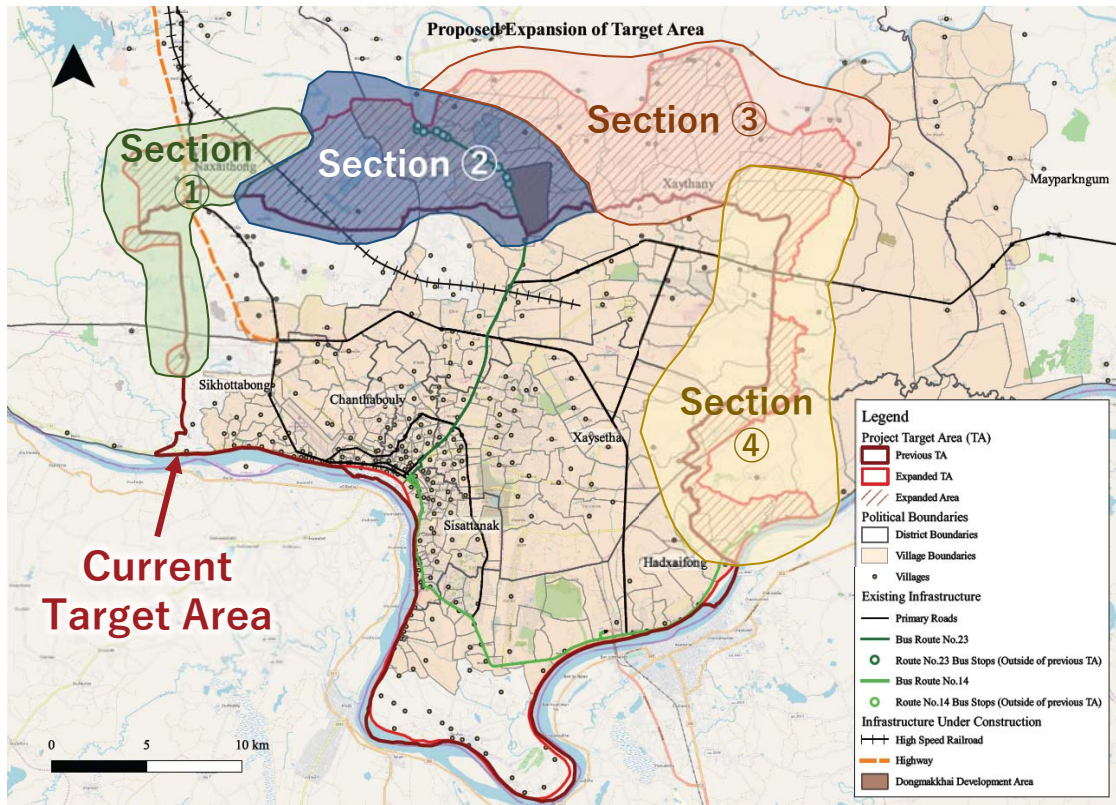
62,000 ha

Population:

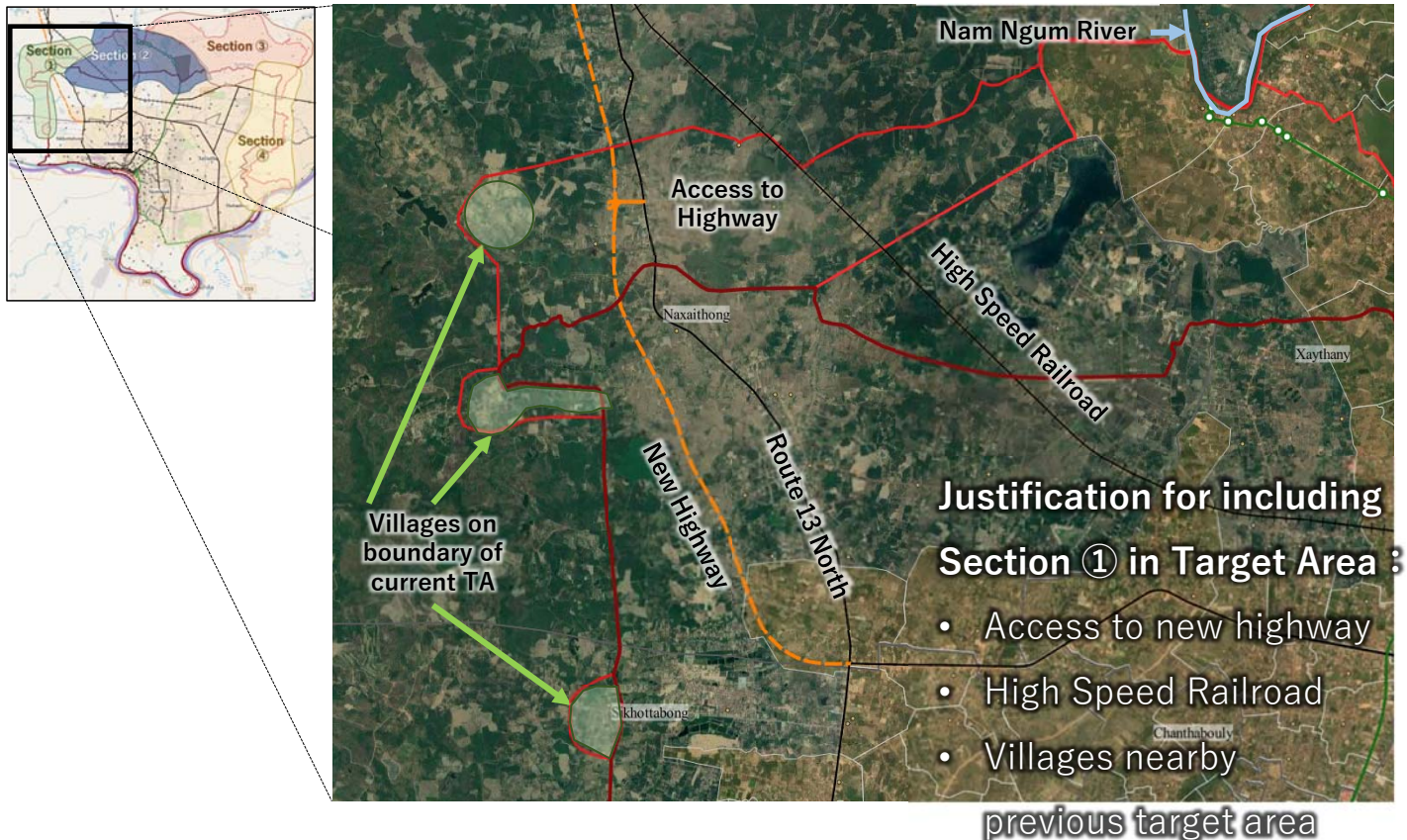
Approx. 820,940 people
(2015 Census)



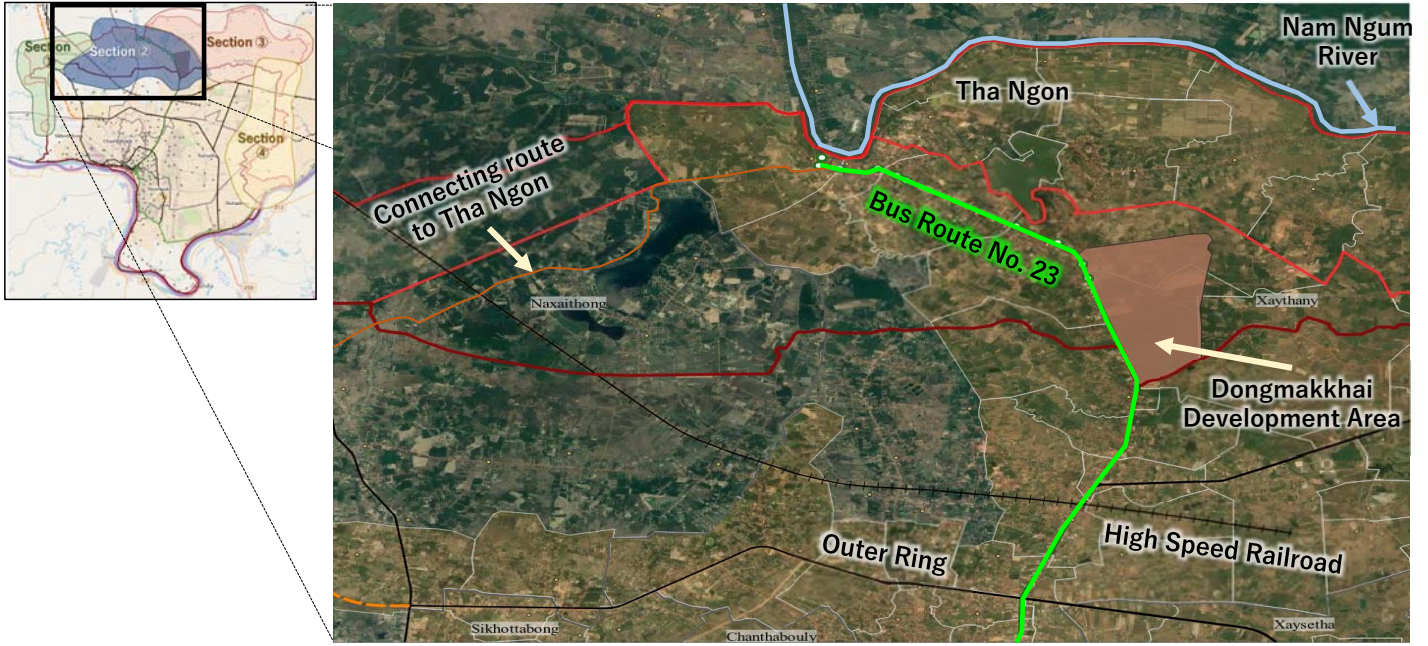
3. Amendment on Target Area



3. Amendment on Target Area



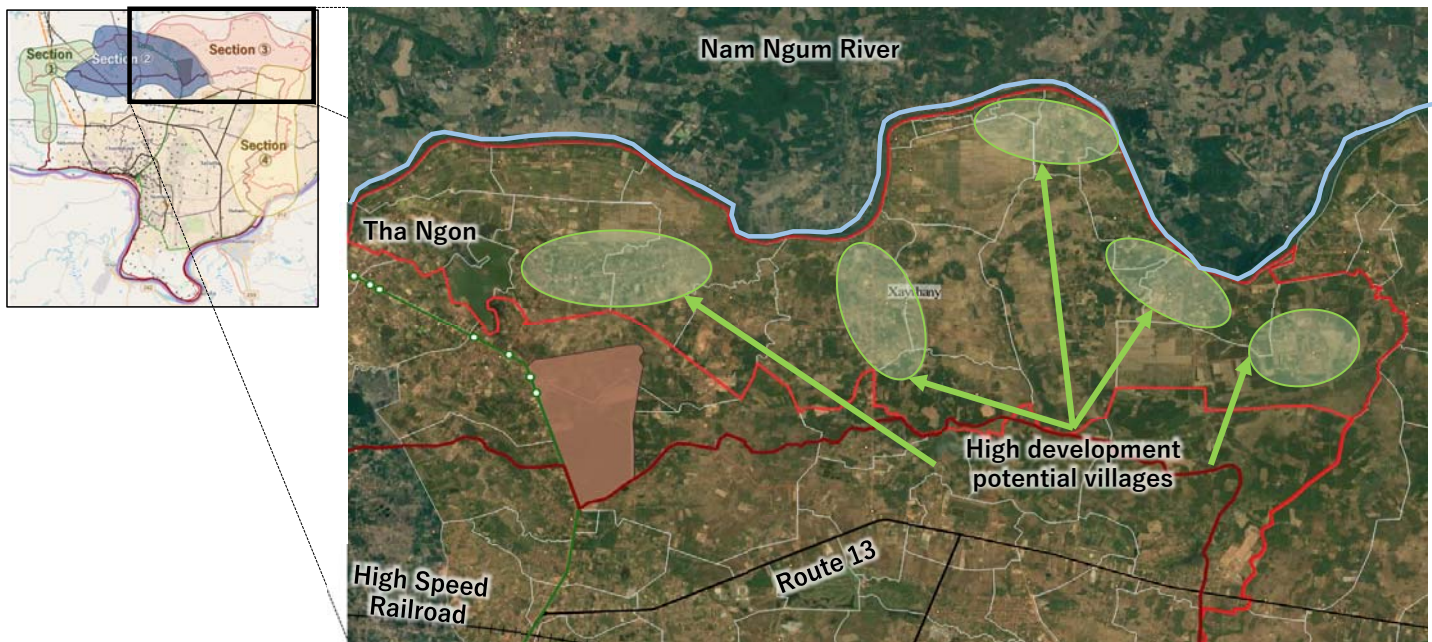
3. Amendment on Target Area



Justification for including Section ② in Target Area :

- Bus Route No. 23 gives service up to Tha Ngon area
- Dongmakkhai Development Area
- Natural northern border with Nam Ngum River

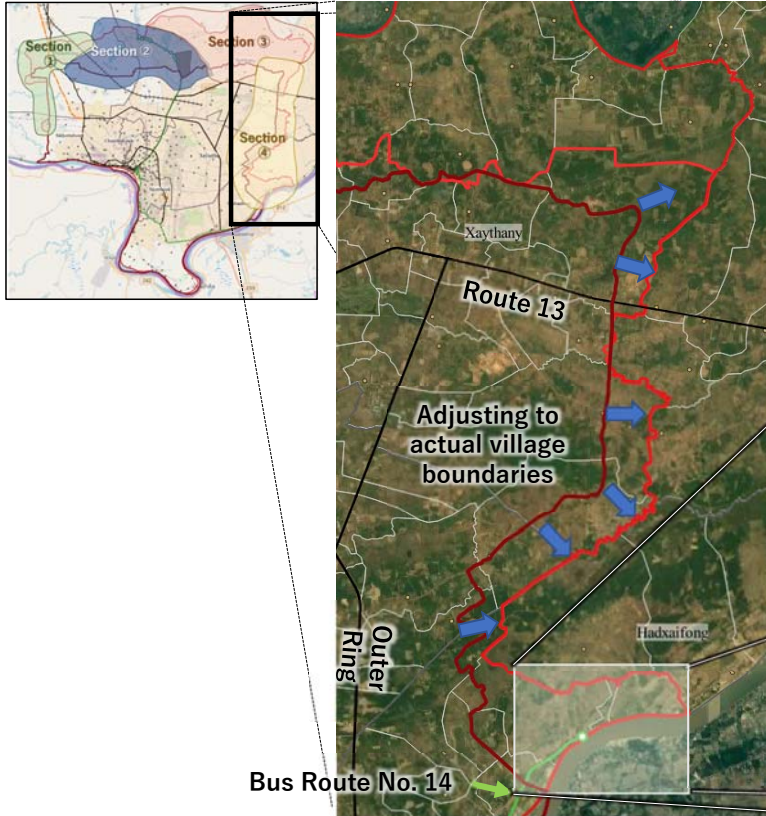
3. Amendment on Target Area



Justification for including Section ③ in TA :

- Identified high development potential villages in this area

3. Amendment on Target Area

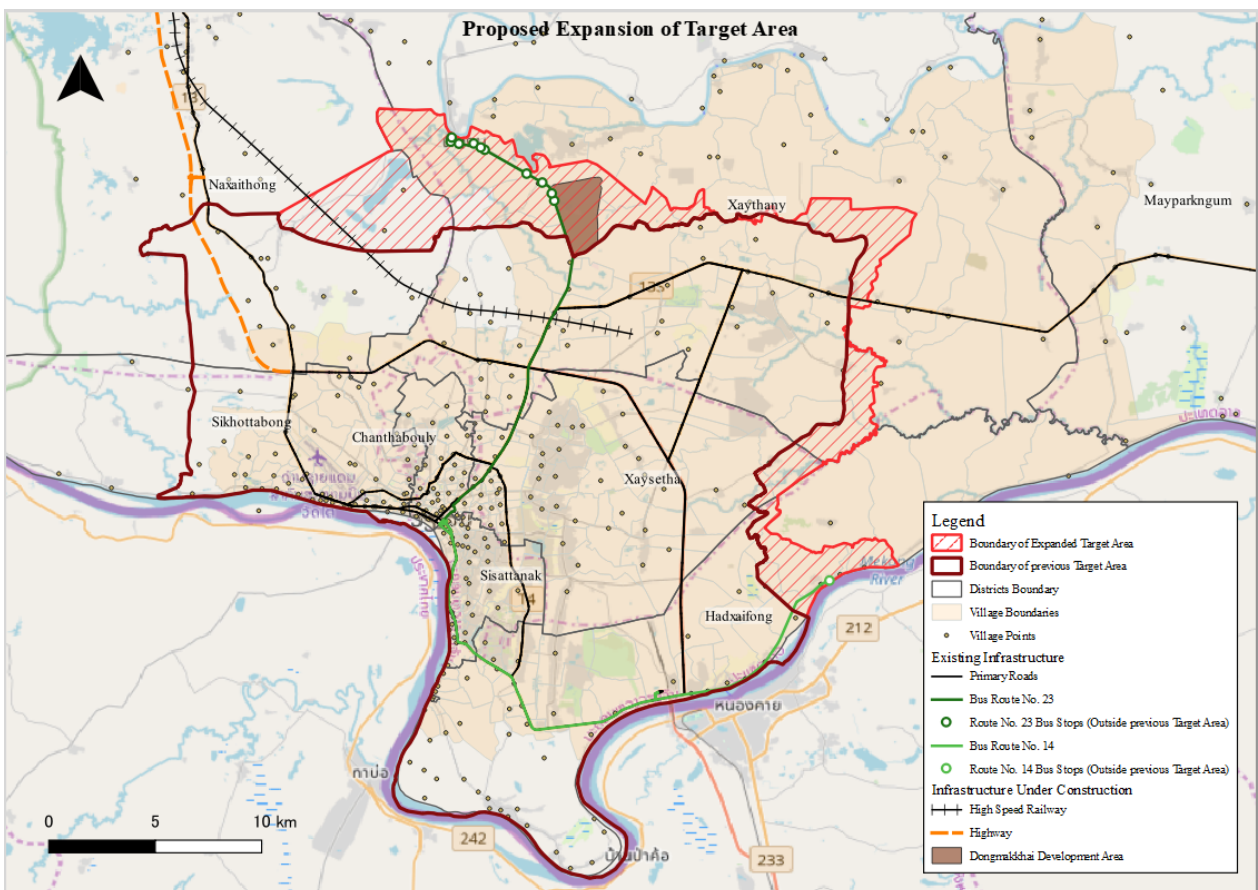


Justification for including Section ④ in TA:

- Adjusting the current boundary to existing village boundaries
- Inclusion of complete service area of Bus Route No. 14
- Inclusion of development on the banks of the Mekong River



3. Amendment on Target Area



4. Project Activities

4.1 Traffic Survey

Traffic surveys for traffic demand forecast are planned and prepared, and it is expected to start from October 2019. The traffic survey consists of,

(1) Person Trip Survey

Person trip (PT) survey is an essential survey for traffic demand forecast for urban transport planning. PT survey is conducted by visiting and interview with 4,700 households in the study area.

The survey items include;

- Household demographic information and household economic conditions (vehicle ownership, housing type, household income etc.);
- Individual attributes (social status, income etc.) of each household member aged 6 years old and more;
- Trip (or travel) information of each household member; and
- Additionally, attitude survey for using of public transport, and daily activities for seven days of all household members aged 6 years old and more only for 100 household selected from sample household.

4. Project Activities

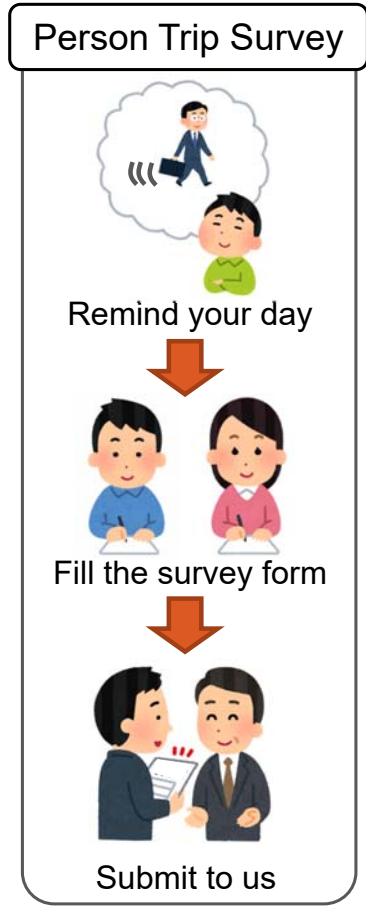
4.1 Traffic Survey

In Vientiane Capital,

Who, What time, What purpose, Where to where, How,
people are moving?



4. Project Activities



Identify how many people are moving from where to where.

4. Project Activities

(2) Cordon Line Survey

Cordon Line is a boundary of the study area, and cordon line survey is a survey to obtain traffic (or passenger) volume and characteristics of inbound/outbound trip to/from study area. Cordon line survey is able to obtain information of trips made by non-residents such as foreigner.

The interview items include transport mode, origin and destination of trip, trip purpose etc.

(3) Screen Line Survey

Screen line is a imaginary line such as river or railway which divides study area into a few area, and screen line survey is a traffic count survey on the road crossing screen line (such as bridge on river). The results of screen line survey will be used for calibration of current traffic demand estimated by person trip survey. The survey items are traffic volume by direction and type of vehicle type.

Cordon Line Survey Location

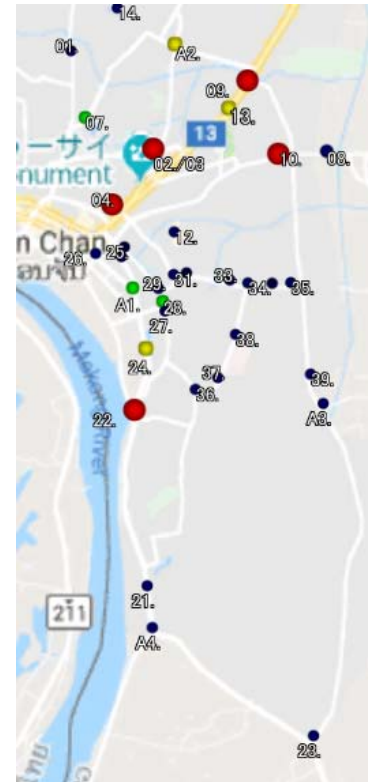
No.	Name (tentative)
1	CL01: Friendship bridge
2	CL02: Buddha Park
3	CL03: NH13S
4	CL04: Ban Na Monh
5	CL05: NH10 Tha Ngon Bridge
6	CL06: Rte Veunkham
7	CL07: NH13N
8	CL08: Nong Teng Fish Pond
9	CL09: Ban Mai
10	CL10: Wattay Airport
11	CL11: N. Bus Terminal
12	CL12: S. Bus Terminal
13	CL13: Central Bus Station



4. Project Activities

4.2 Pilot Project 1

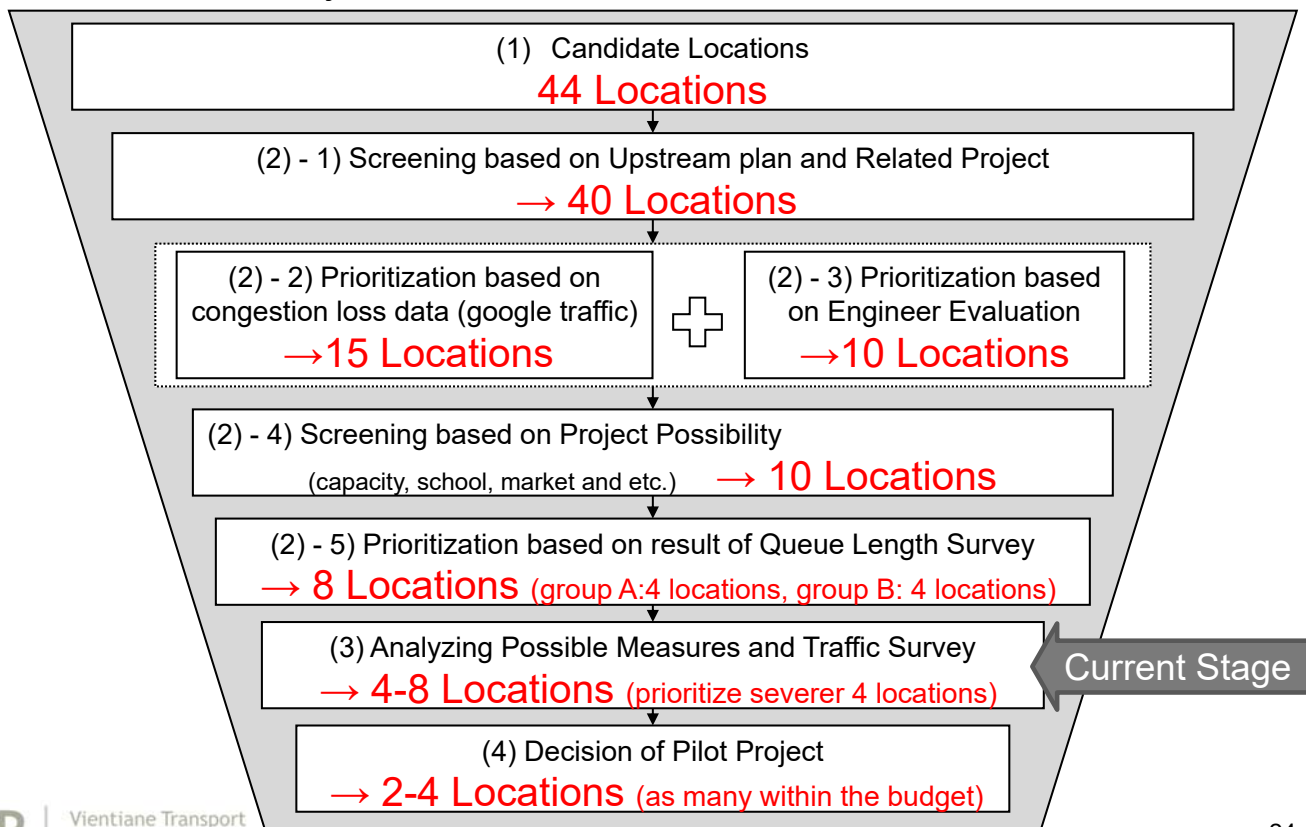
44 Candidate locations for Pilot Project



4. Project Activities

Selection Procedure

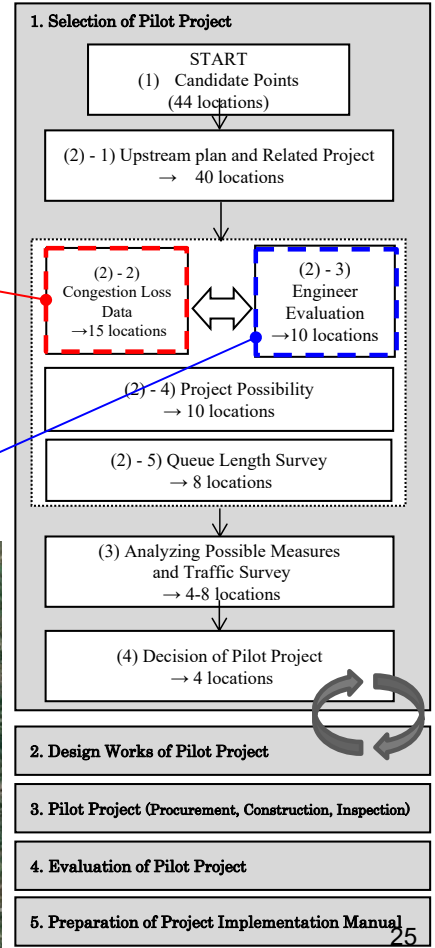
Selection flow of Pilot Project is shown in below.



4. Project Activities



Pilot Project Flow



4. Project Activities

The Result of the Queue Length Survey

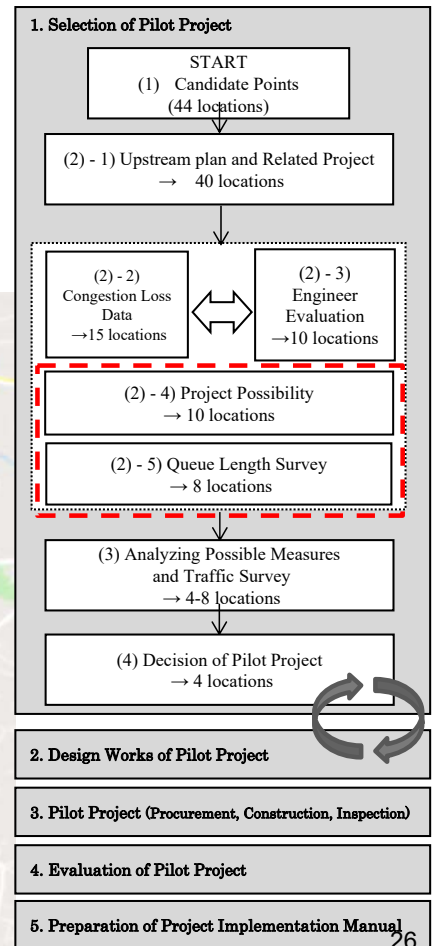
No.	Name	Queue(m)
1	ASEAN/Sibounheuang	750
2	Savang - Circus Intersection	600
3	T-Junction Donedeng	548
4	Phonthun Intersection	450
5	Thadeua	288
6	Khouvieng	258
7	13 North	205
8	Phontong-Dongdok	204
9	IRR	30
10	ORR	0

Group A

Group B



Pilot Project Flow



4. Project Activities

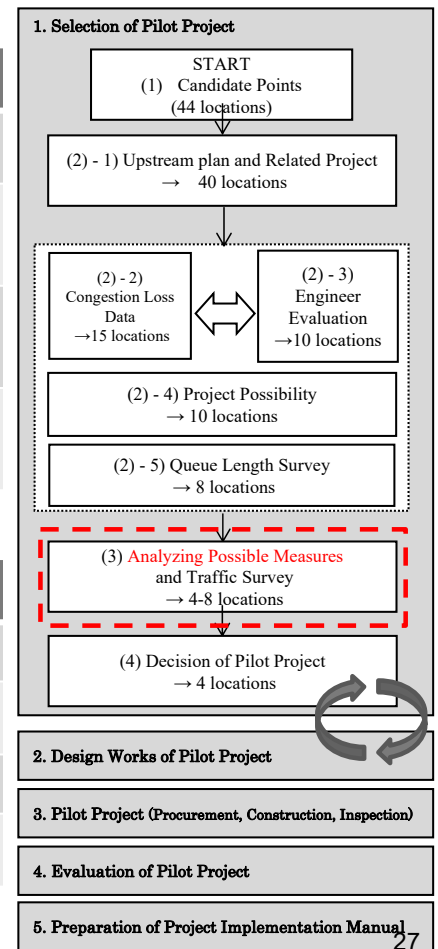
Possible countermeasures for Group A

No.	Name	Reason	Candidate Measure	Queue (m)
1	ASEAN/Sibounheuang	U-turn traffic reduce capacity	Extend median	750
2	Savang - Circus Intersection	Queue affect adjacent intersection	Modification of cycle time Modification of intersection shape	600
3	T-Junction Donedeng	No left turn lane No traffic signal	Installation of traffic signal Installation of left turn lane Marking	548
4	Phonthun Intersection	Queue from adjacent intersection affect this intersection	Marking, Guide marking Installation of traffic signal linked adjacent intersection	450

Possible countermeasures for Group B

No.	Name	Reason	Candidate Measure	Queue (m)
5	Thadeua	Heavy left turn traffic	Modification of cycle time	288
6	Khouvieng	Turning travel pass affect adjacent lane	Roundabout widening	258
7	13 North	Heavy left turn traffic	Modification of cycle time	205
8	Phontong-Dongdok	Queue from adjacent intersection	Modification of cycle time Modification of intersection	204

Pilot Project Flow



4. Project Activities

Type of countermeasures for the candidate locations

Soft Measure

- Modification of cycle time

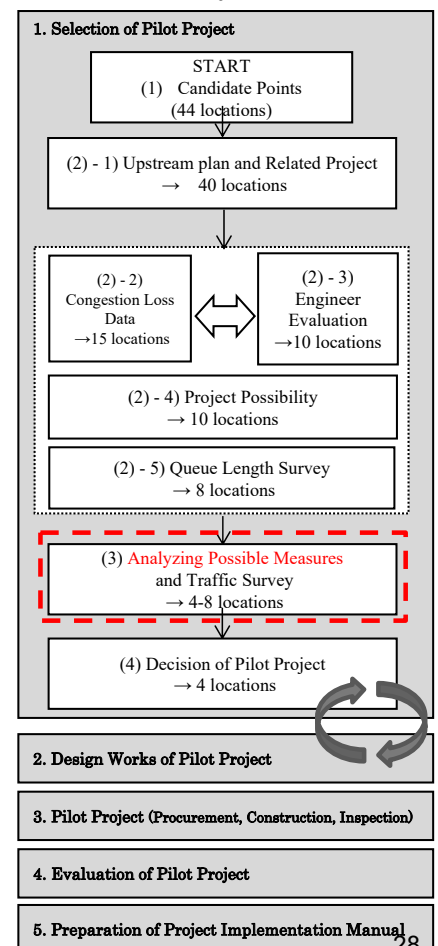
Hard Measure

- Lane distribution by marking within existing width
- Installation/modification of channel
- Installation of traffic signal
- Installation of median
- etc.

Field test (for public acceptance)

Group	Soft Measure	Hard Measure (Field test)	Hard Measure
A	Savang - Circus Intersection	Junction Sibounheuang	T-Junction Donedeng
			Phonthun Intersection
B	T-Junction 13 North		Khouvieng
	Thadeua Intersection		Phontong-Dongdok

Pilot Project Flow



4. Project Activities

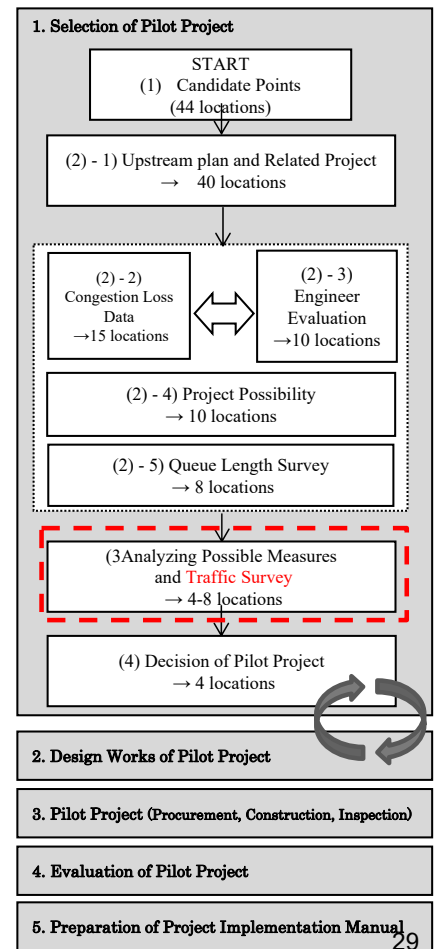
The Priority for the Traffic Survey

No.	Name	Group	Traffic Survey
1	ASEAN/Sibounheuang	A	1 location
2	Savang - Circus Intersection	A	2 locations
3	T-Junction Donedeng	A	3 locations
4	Phonthun Intersection	A	2 locations
5	Thadeua	B	1 location
6	Khouvieng	B	1 location
7	13 North	B	1 location

Note: Phontong-Dongdok (group B) is included as adjacent intersection of Savang - Circus Intersection



Pilot Project Flow



4. Project Activities

3.3 Training in Japan

(1) Subject

Urban Transportation

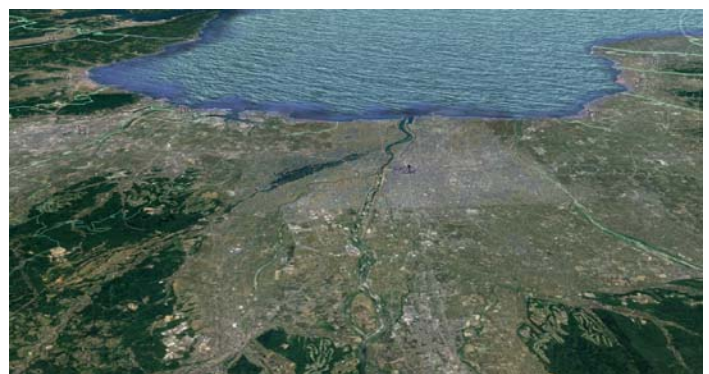
(2) Location

Toyama City

- Population: 420,000
- Urban Planning Area: 340,000ha

(3) Schedule

16, Nov, 2019 ~ 24, Nov, 2019



5. Report from the Bus Project

-Social Experiment on Bus Priority Signal Control-

Location Map



5. Report from the Bus Project

Schedule

MAY 2019						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
	Site Check		★	★		
19	20	21	22	23	24	25
		WG		Training TP		
26	27	28	29	30	31	
	Implementation					

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★ : Survey

JUNE 2019						
SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
	Implementation					
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

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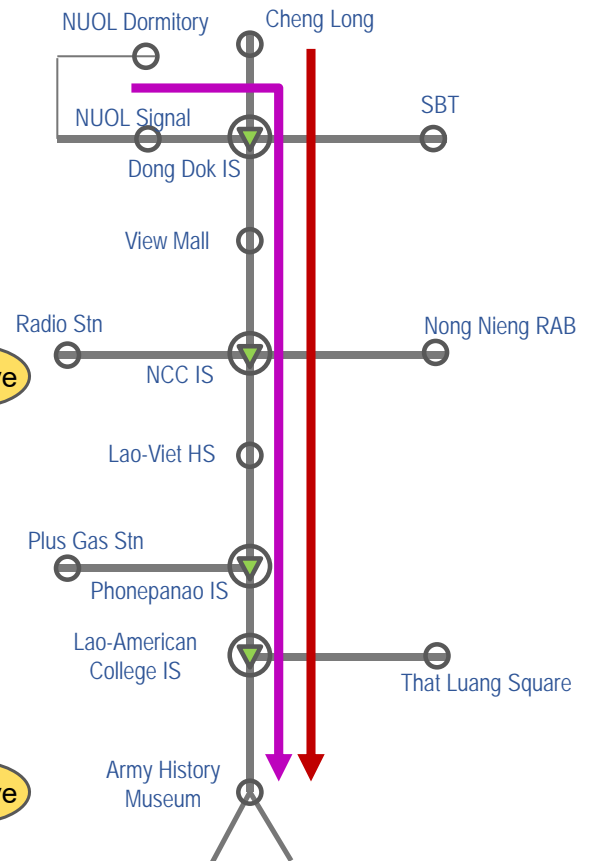


5. Report from the Bus Project

Travel Time and Speed of Bus

	Travel Time (min)	
	Tha Ngon ↓	Dong Dok ↓
Before	30.2	33.2
Implementation	18.7	25.1
Time saved	-11.4 38% Improve	-8.1 24% Improve

	Intersection Delay (min)	
	Tha Ngon ↓	Dong Dok ↓
Before	8.7	7.4
Implementation	3.1	3.7
Reduction time at intersection	-5.6 64% Improve	-3.7 50% Improve



5. Report from the Bus Project

Findings and Recommendation

■ Findings

- ✓ Increasing green time on the bus routes lead advantage of smooth bus passing and moreover, **no severer congestion** at the other legs at the intersection are observed.
- ✓ It indicates that the signal control by the manual that has been conducted so far **has extra seconds that could be used for more efficient traffic control.**
- ✓ Then, the manner in this social experiment is definitely one of **the optimal solutions** as the way for using up those extra seconds.

5. Report from the Bus Project

Findings and Recommendation

■ Recommendation

- ✓ Although the signal control as same as this social experiment will work effectively with current traffic demand, the intersection **will start being congested** in a certain phase **in the future with increasing traffic demand.**
 - ✓ When the traffic volume reaches the capacity and the congestion is observed at the intersection, the green time for the bus route should be maintained even if it causes congestion on the other legs in order to generate a common sense that **buses are faster than private cars.**
 - ✓ Such kind of reputation will be a **strongly attractive benefit** and it can encourage citizen to use public transportation.
- Discussion
- Do we maintain this signal control?
 - How can we make it?

5. Report from the Bus Project

Media Coverage



6. Project Design Matrix

【Project Purpose】 The capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane are upgraded, and their administrative and managing capacities for implementing urban transport policies from the MP are strengthened.

1. C/Ps who attended serial training sessions on urban transport MP formulation improve their understandings on the issues, and achieve over **X%** on the post-training test scores
2. C/Ps who attended training (s) on the project implementation manual improve their understandings, and achieve over **X%** on the post-training test scores
3. MPWT, DOT or any other relevant institution officially approves the urban transport MP and action plan ("any other relevant institution" which is responsible for approving the MP and action plan" to be identified, if any).

(X: to be identified after baseline study)

【Output 1】 The mechanism for discussing and sharing the views on the issues of urban transport is established.

1. More than **X** issues identified during the initial stage of in the Project are discussed in the meetings of the CTMC
2. More than **X** issues identified during the initial stage of in the Project and discussed in the meetings of the CTMC are dealt by related institutions with follow-up activities

(X: to be identified by the 3rd JCC)

6. Project Design Matrix

【Output 2】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

1. More than **18** C/Ps receive training on formulating the urban transport MP
2. An urban transport MP for Vientiane Capital is formulated by updating the year 2008 version.

(X: to be identified by the 2nd JCC)

【Output 3】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

1. More than **X** C/Ps play specific roles in the planning and implementation of the pilot projects (**X: to be identified when the pilot project is decided**)
2. More than **18** C/Ps receive training on the project implementation manual (**X: to be identified by the 2nd JCC**)
3. Urban traffic-related indicators improve on average by **X%** in pilot project areas ("urban traffic-related indicators" and **X: to be identified when the pilot project is decided**).

2-1, 3-1: 18 C/Ps

Total average of the attendance of the working group session is expected to be 80% or more.

8. Discussion

Discussion Point

1. Amendment on the target area
2. Policy for public transportation
 - ✓ Roles for several transportation mode such as sonteow and tuktuk

Items for the report to CTMC

1. Pilot project
2. Bus priority signal control

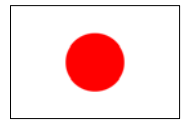
8. Discussion

Discussion Point

1. Amendment on the target area
 - Further discussion in the WG and the result will be shared to JCC members.
2. Policy for public transportation
 - ✓ Roles for several transportation mode such as sonteow and tuktuk
 - Parking space for sonteow is difficult.
 - Fresh market relocation might be able to help the situation.
 - No more new tuktuk registration.
 - Number of registered vehicle are shared from DPWT.
 - Integrated transport system, after BRT launch, which covers wider area is necessary.
 - Sonteow should provide uncovered area by buses with the service rather than competing to bus service.
 - UTMS will be established under DPWT to supervise public transport in Vientiane.
 - MaaS concept can be taken into account to solve current situation, tackle with last 1 mile problem.

Items for the report to CTMC

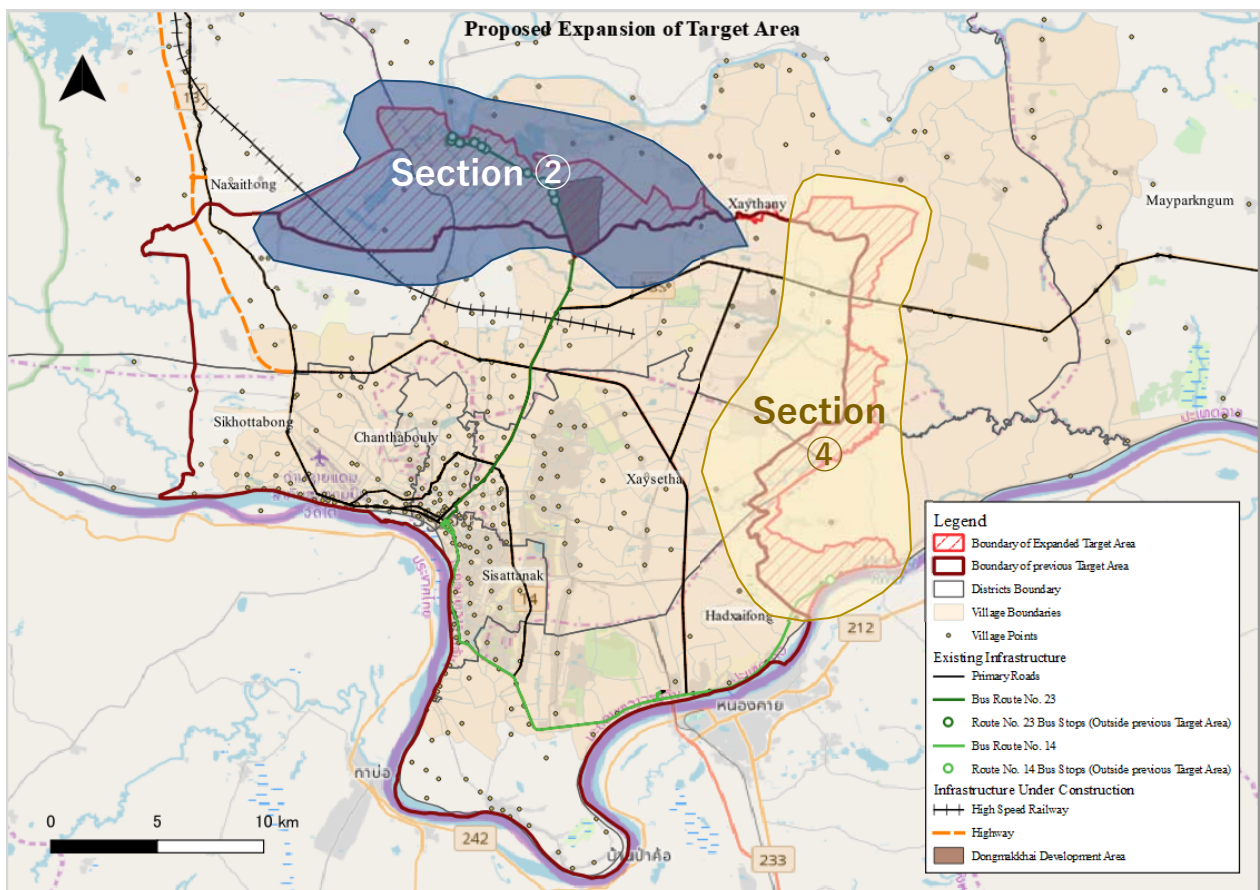
1. Pilot project
2. Bus priority signal control

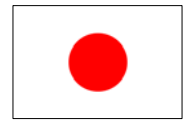


Thank you



3. Amendment on Target Area





The Project for Institutional Capacity Building for Sustainable Urban Transport System

Immediate Action Plan and Progress of Pilot projects

February 2020



JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN INCORPORATED
ORIENTAL CONSULTANTS GLOBAL

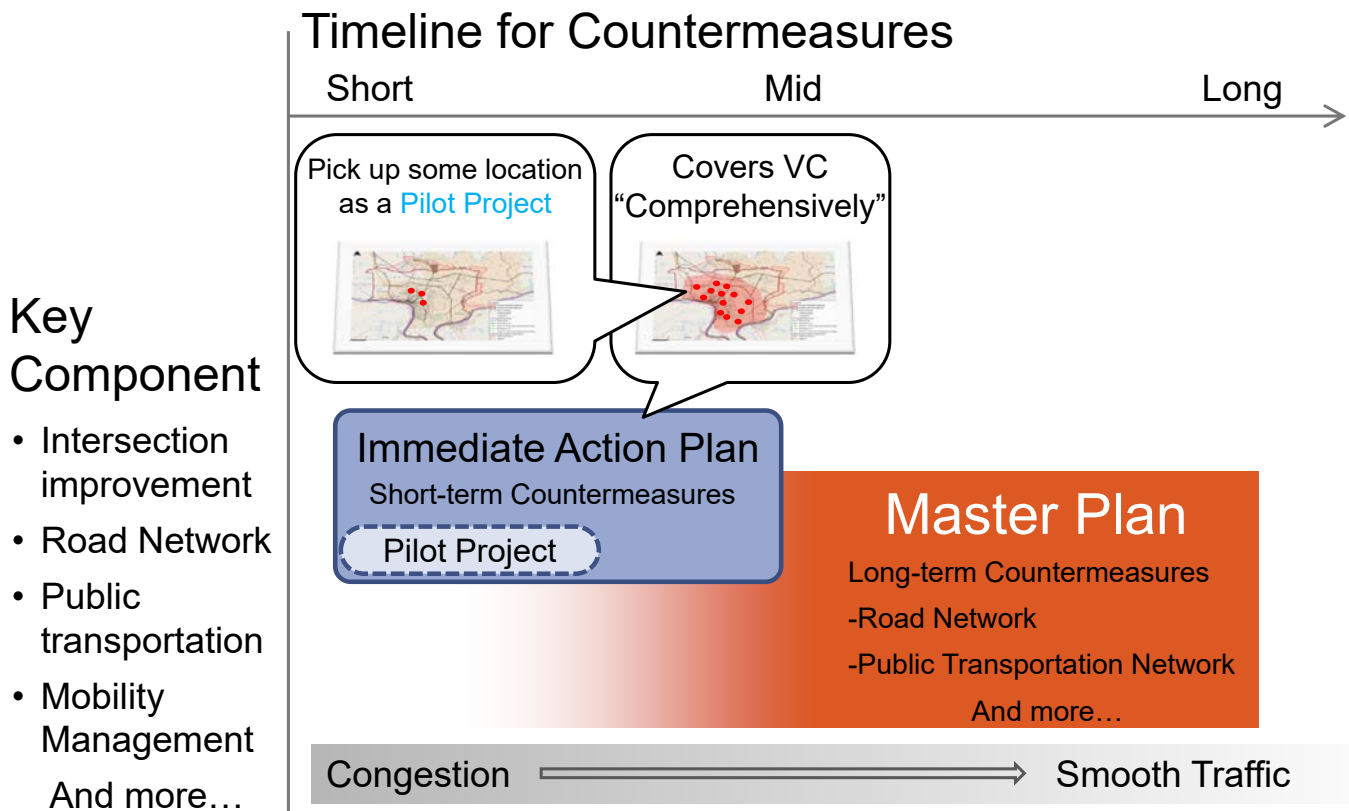


CONTENTS

- 0. Overview**
- 1. Immediate Action Plan (IAP)**
- 2. Pilot Project**
- 3. Schedule**
- 4. Discussion**

Overview

What is Immediate Action Plan?



1.Immediate Action Plan

1. Immediate Action Plan (IAP)

1. Objectives & Contents

Objectives

- By grasping the overall picture of the traffic congestion currently in Vientiane, and categorizing the measures into short, medium, and long term, it will be clear where to start immediately and where to take measures as Mater Plan.

Contents

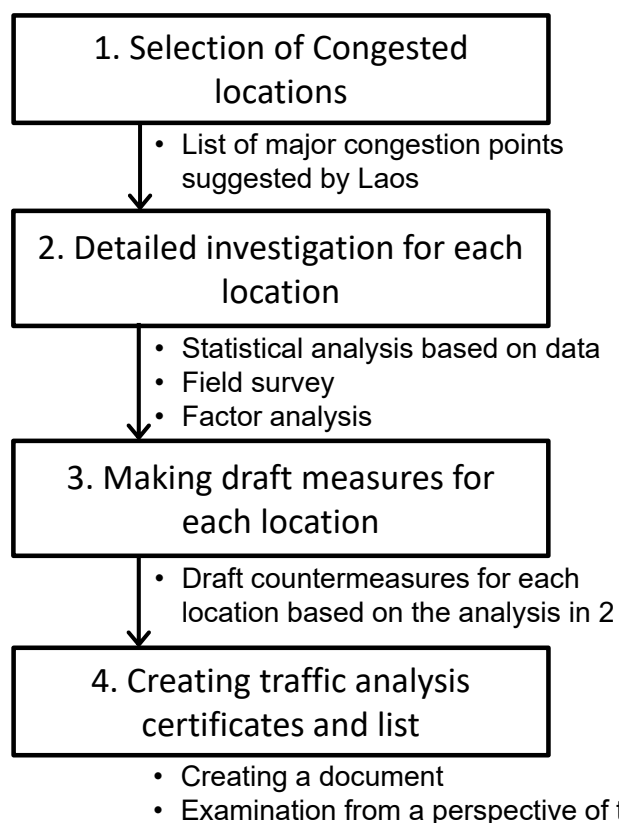
- Regarding road traffic congestion, the materials that analyze the situation of each point and embody the countermeasure plan

Positioning

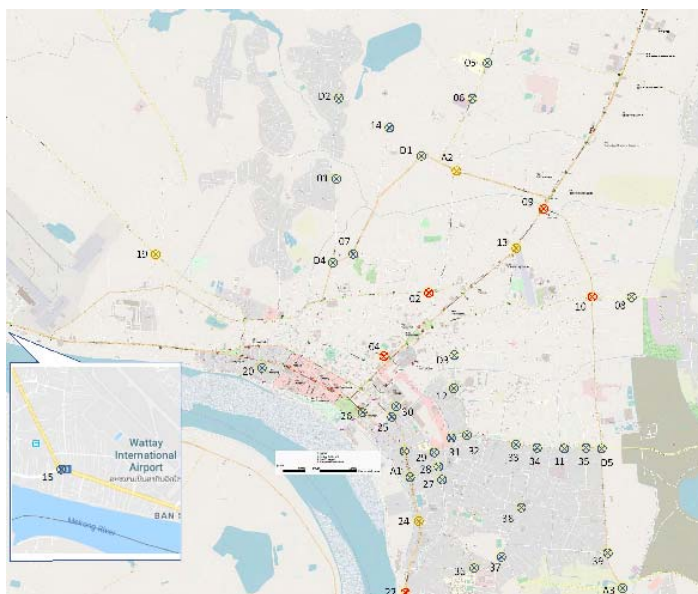
- A part of the main project
- Pilot projects will be implemented based on the contents of the IAP after location selection and further detailed examination.

1. Immediate Action Plan (IAP)

2. Planning Process



List of major congestion points suggested by Laos
+ C/P selection
+ JICA Expert Team selection



[Congested locations]

1. Immediate Action Plan (IAP)

3. Features

【Problems when formulating congestion mitigation plan】

- Which locations should be addressed and in what way?
- Budget cannot be planned (priorities and required costs are unclear)
- Doubt, anxiety; Will traffic congestion really disappear if we continue to take measures in places and places that are noticeable?



【IAP】

- Specify the timing to implement measures (short term, medium term, long term)
- Various measures including both of Hard and Soft
Ex) Hard :Signal installation, Soft : Modification of cycle time
- By making a list, congestion situation, factors and countermeasures can be viewed and compared at a glance



1. Immediate Action Plan (IAP)

4. Component

List

- Data list of 50 traffic congestion points in Vientiane (including traffic congestion factors and countermeasures)

No.	Type of Road	Location (Congestion Point)	Type	Congestion Location	Problems	Countermeasures	Notes
1	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
2	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
3	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
4	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
5	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
6	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
7	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
8	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
9	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	
10	Arterial	Changkhay	Signalized	Signal timing	Signal timing	Signal timing	

Traffic Analysis Certificates

- Detailed information such as traffic survey results and countermeasures proposed in the illustration for each congested point


Two portions for each traffic congestion point

1. Immediate Action Plan (IAP)


No.	28	District	Sisattanak	Village	Phaxay
Landmark	Small roundabout				
Road (Main)			Road (Sub)		
Name	Khuveng	Name	Thatkhao		
Class	Provincial	Class	Municipality		
No. of Lanes	1+1				
Operator	DPWT V				
Crossing Type	Roundabout				
Traffic Condition	Traffic congestion				
Cause	Friction between left turn vehicle and through vehicle				
Peak Hour	morning (8:00-8:30), evening (16:00-16:30)				
Seriousness (1-5)	(4)				
Countermeasures - Difficulty: (1-5)	Improvement of roundabout shape (3) Install traffic light (3)				
Traffic Volume (Daily, hourly, Motorcycle, Heavy Vehicle, etc.)					
Traffic Direction: From Khuveng			Traffic Direction: From Roundabout Corner College		
Duration	Motorcycle	Car (Sedan, Pick-up, Minivan, Jeep)	Truck	Bus	Remark
08:00 - 08:30	1034	311	0	3	
16:00 - 16:30	620	201	0	1	
Total	1654	672	0	3	
Traffic Direction: From Phaxay or Thatkhao Intersection					
Duration	Motorcycle	Car (Sedan, Pick-up, Minivan, Jeep)	Truck	Bus	Remark
08:00 - 08:30	413	270	0	2	
16:00 - 16:30	294	176	1	1	
Total	707	446	1	3	
Traffic Accident					
Yearly	Unknown	Injury	Unknown	Main Type	Unknown
Traffic Signal	Police Box	N/A	Control Box	N/A	CCTV Camera
	1st Green	2nd Green	3rd Green	4th Green	Cycle Time
Preset: Normal	N/A	N/A	N/A	N/A	N/A
Mo	N/A	N/A	N/A	N/A	N/A
EW	N/A	N/A	N/A	N/A	N/A

Keywords for congestion causes & measures

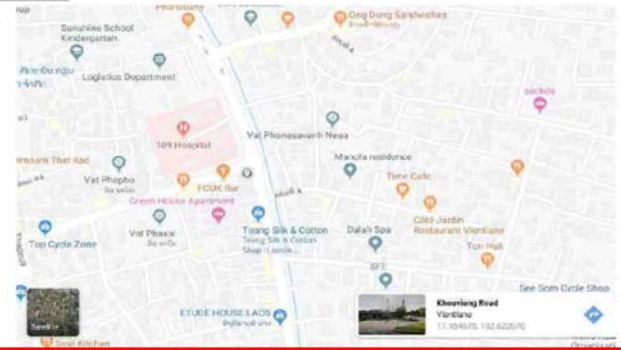
Location (Area & Enlarged) Location info.



Pictures



Road Drawing



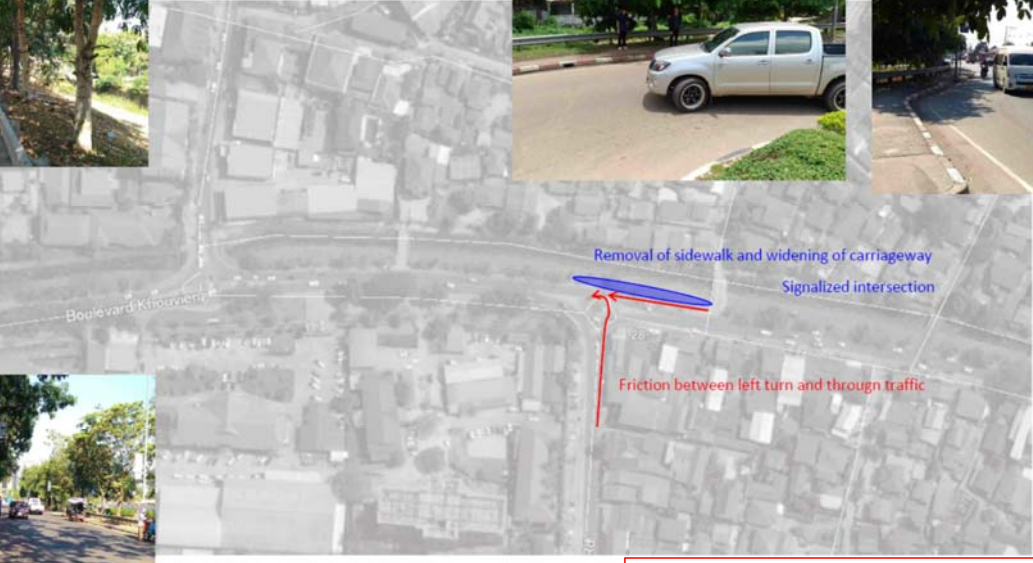




Traffic survey info.

1. Immediate Action Plan (IAP)

No.	28	District	Sisattanak	Village	Phaxay
Landmark	Phaxay Temple				
Cause	Friction between left turn vehicle and through vehicle				

Countermeasures - Difficulty: (1-5)

- Improvement of roundabout shape (Removal of sidewalk and widening of carriageway)
- Signalized intersection

Detailed Illustration for congestion causes & measures

1. Immediate Action Plan (IAP)

5. Remarks

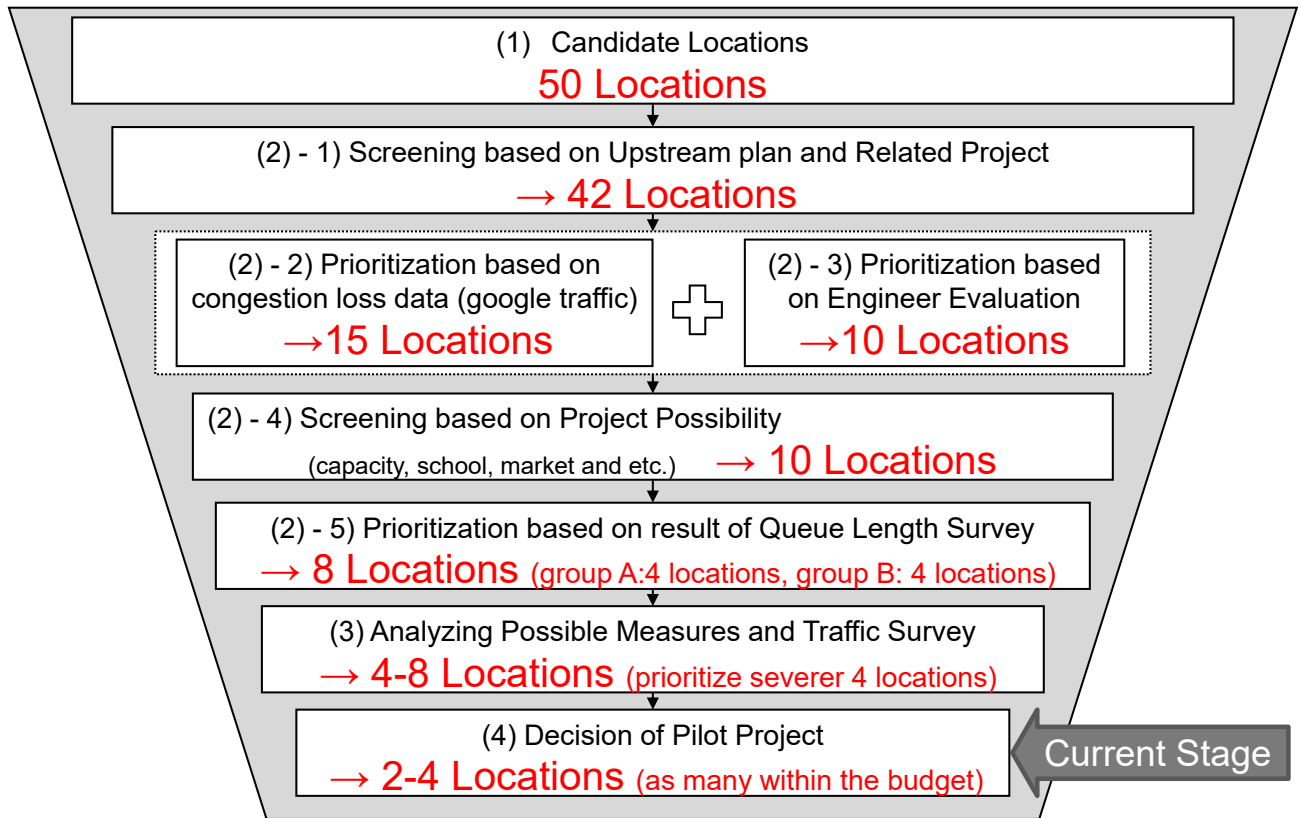
- Data should be updated or improved according to “changes of traffic condition over time” and “progress of survey”
- This is a tool, not a goal. It is important to use the certificates and the list to formulate a congestion countermeasure plan according to the budget scale.
- For better usage, it is desirable to make improvements. For example;
 - Considering the cost information, which will enable us to calculate the budget size.
 - Considering information about “after situation” to use as a PDCA tool.

2. Pilot Project

2. Pilot Project

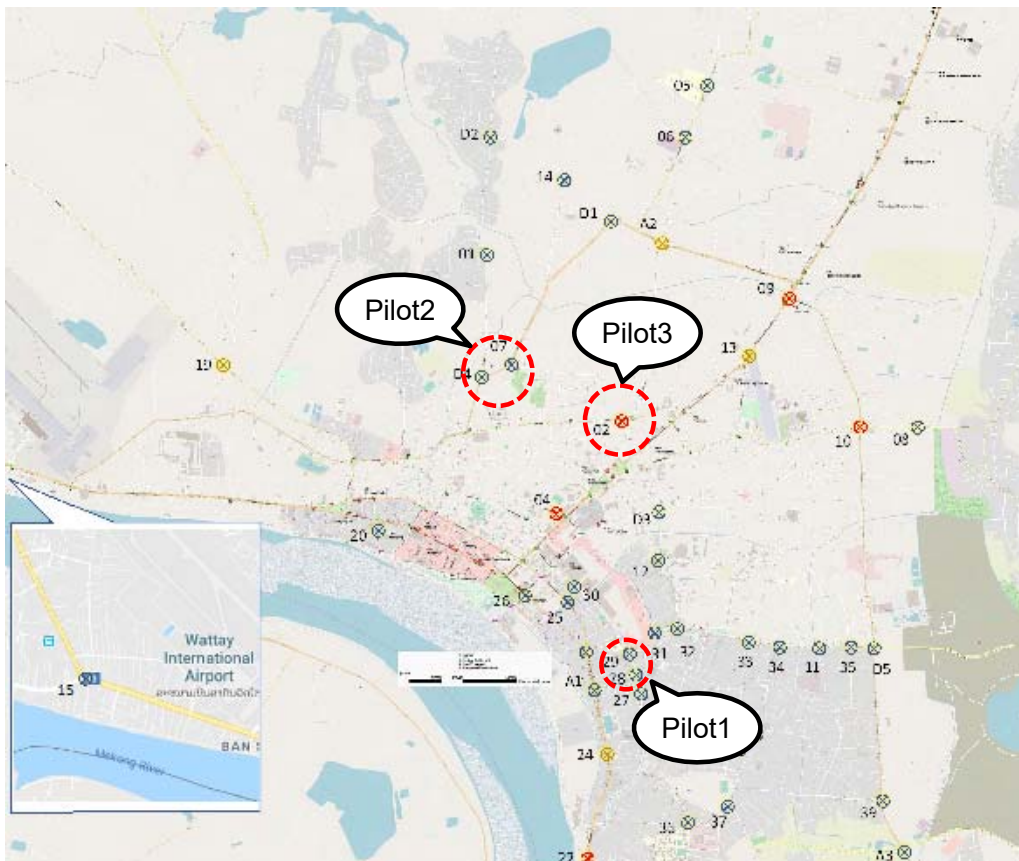
Selection Procedure

Selection flow of Pilot Project is shown in below.



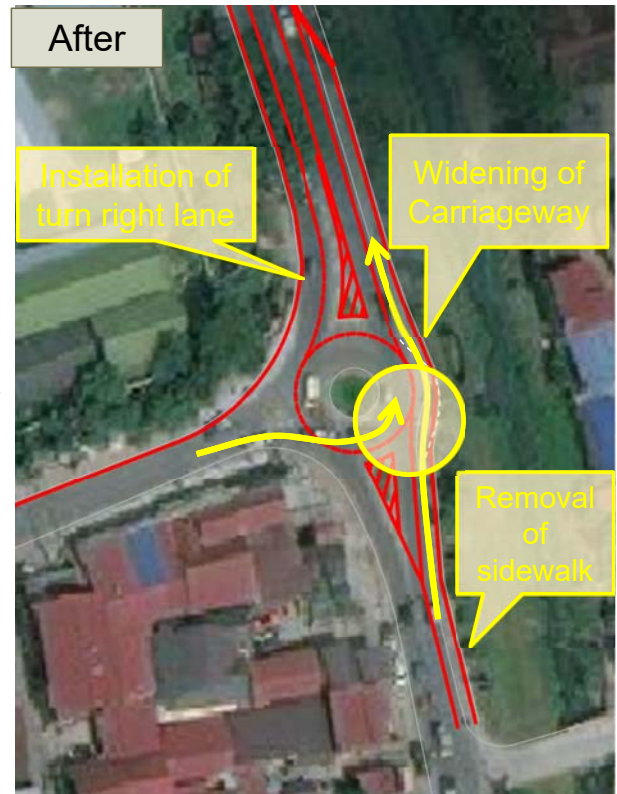
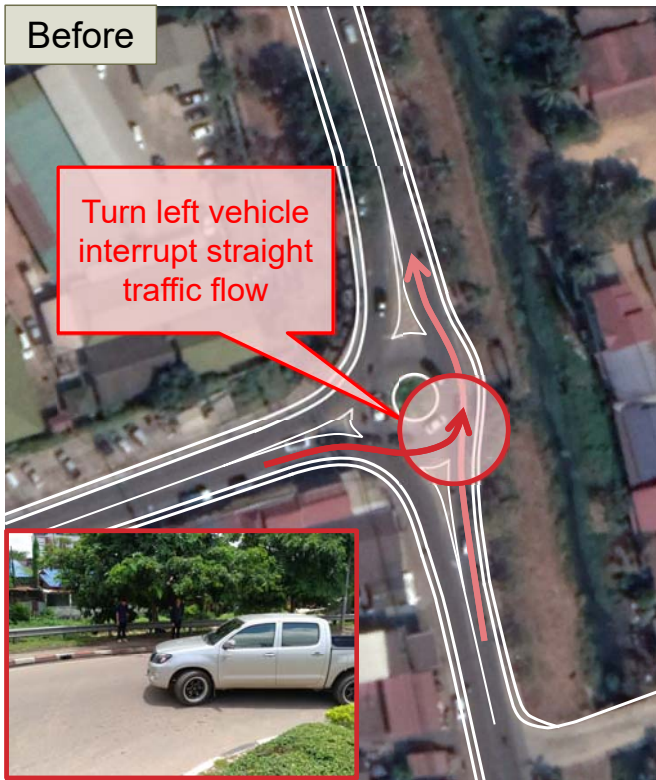
2. Pilot Project

Location Map



2. Pilot Project

Pilot1: Location No. 28

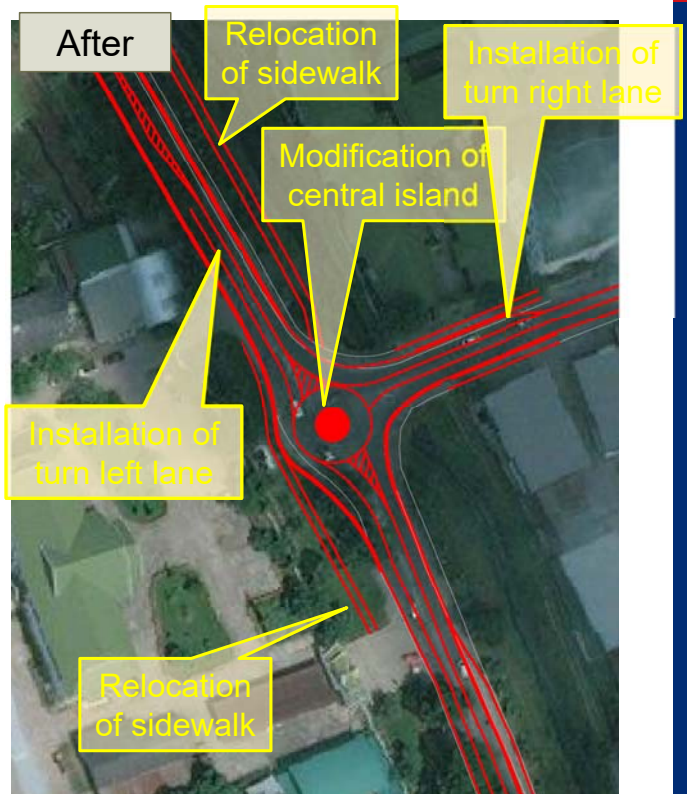
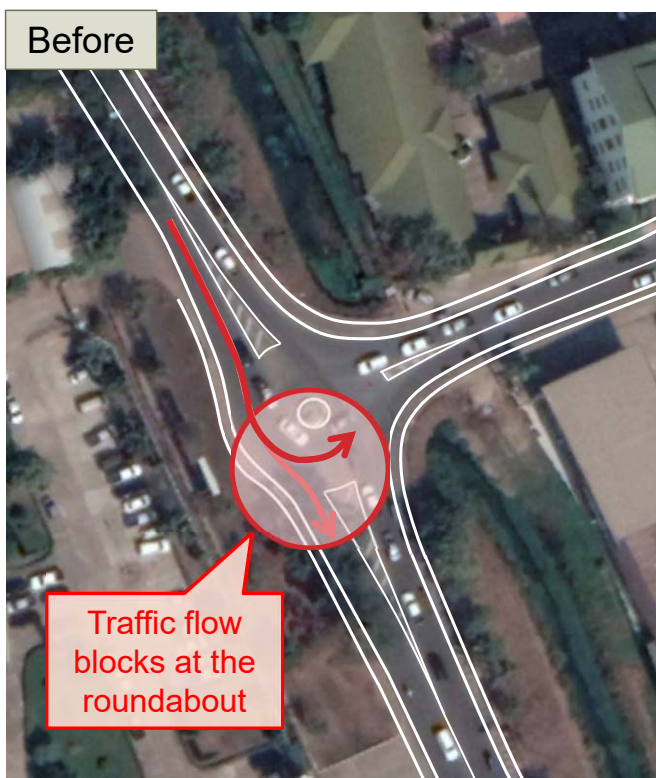


*Finally, design based on Traffic survey and Topographic data
** Width of canal is checked by Japanese standards or locus chart 17

The Project for Institutional Capacity Building for Sustainable Urban Transport System

2. Pilot Project

Pilot1: Location No. 29



*Finally, design based on Traffic survey and Topographic data
** Width of canal is checked by Japanese standards or locus chart 18

The Project for Institutional Capacity Building for Sustainable Urban Transport System

2. Pilot Project

Installation of turn left lane



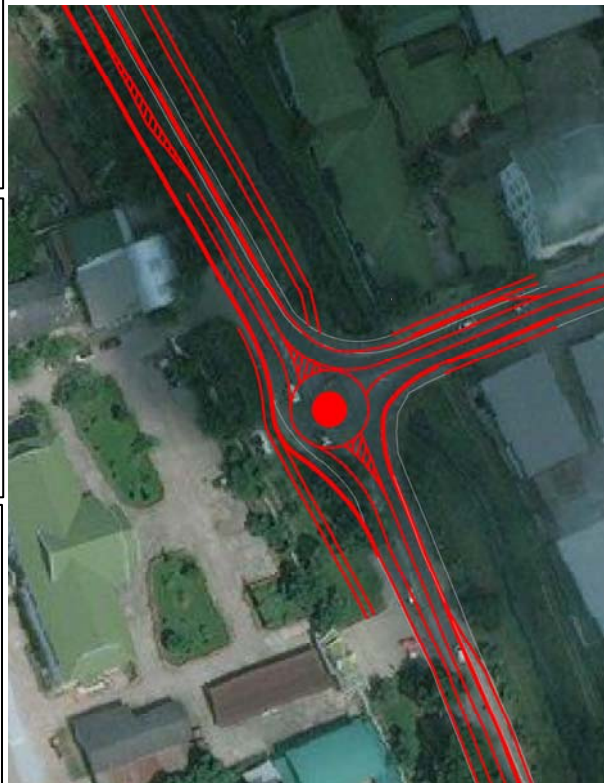
Relocation of sidewalk



Modification of central island



Installation of turn right lane



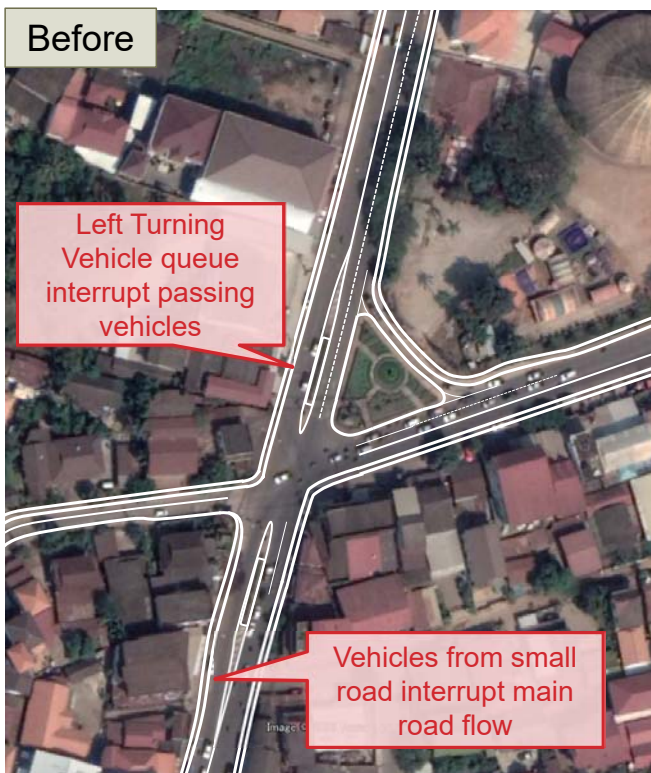
Relocation of sidewalk



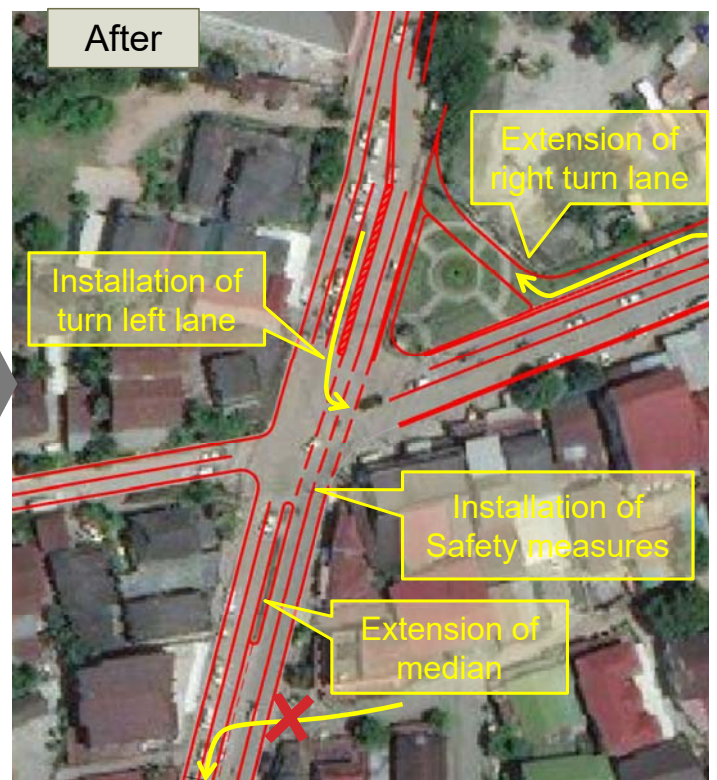
2. Pilot Project

Pilot2: Location No. D4


Before




After




2. Pilot Project



Safety measures
Refractor




Guide marking




Modification of alignment


Extension of right turn lane



Installation of turn left lane



Extension of median



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2. Pilot Project

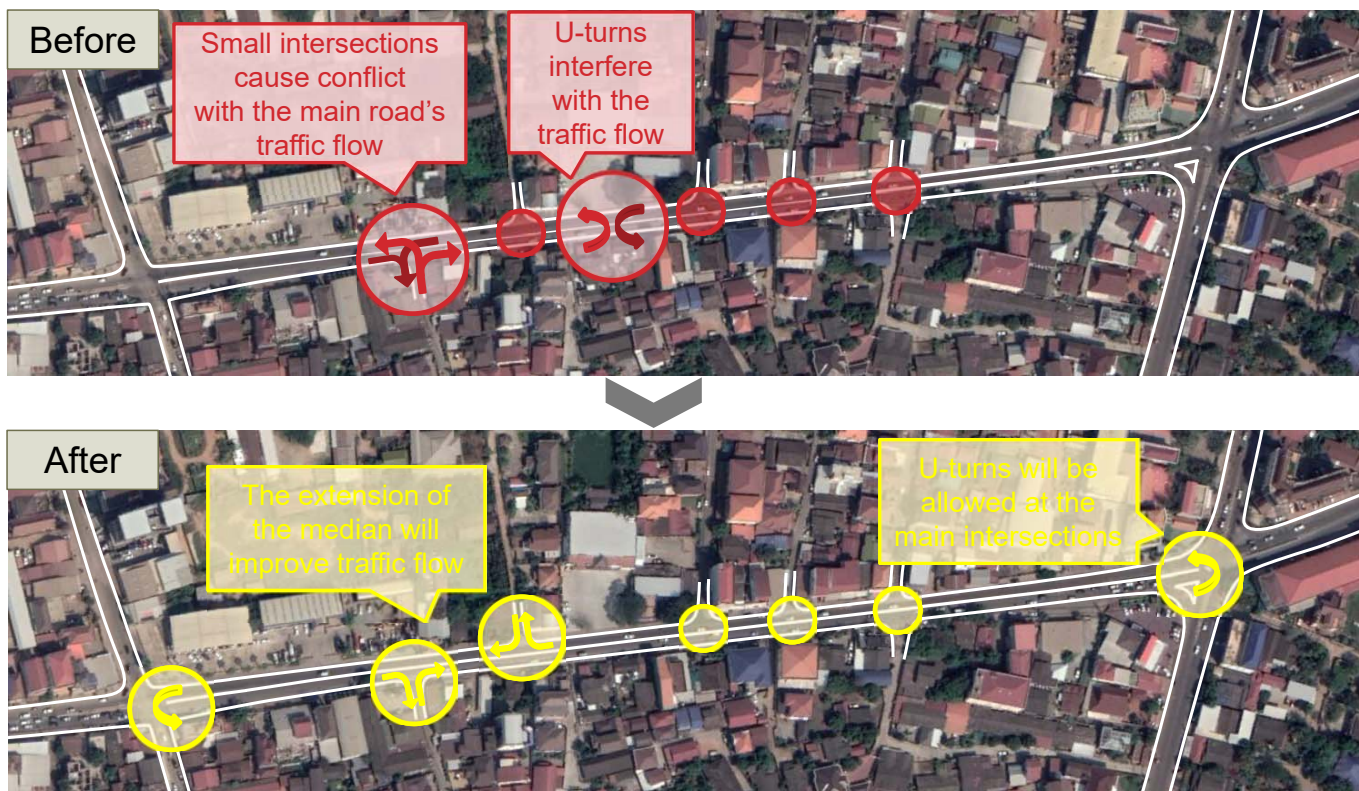
Pilot2: Location No. 7



2. Pilot Project

Pilot3: Location No. 2

- Extension of the median as a field trial test



3. Schedule

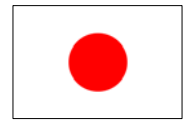
3. Schedule

- Pilot projects will be implemented based on the contents of the IAP after location selection and further detailed examination.

⇒ IAP is closely related to implementation of pilot project

- Schedule:
 - 11th Feb: JCC
 - 12th Feb: CTMC
 - ~Mid March: Further detailed study for Pilot project
 - ~End of March: Start of procurement and construction on Pilot project

THANK YOU FOR YOUR
ATTENTION



The Project for Institutional Capacity Building for Sustainable Urban Transport System

Policy Making Program Part 1: Vision

December 2021



JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN INCORPORATED
ORIENTAL CONSULTANTS GLOBAL



Review of Last WG Meeting

Keywords on the Good Aspects of Vientiane

Green

Mixed/
Diverse

Good Old
Townscape

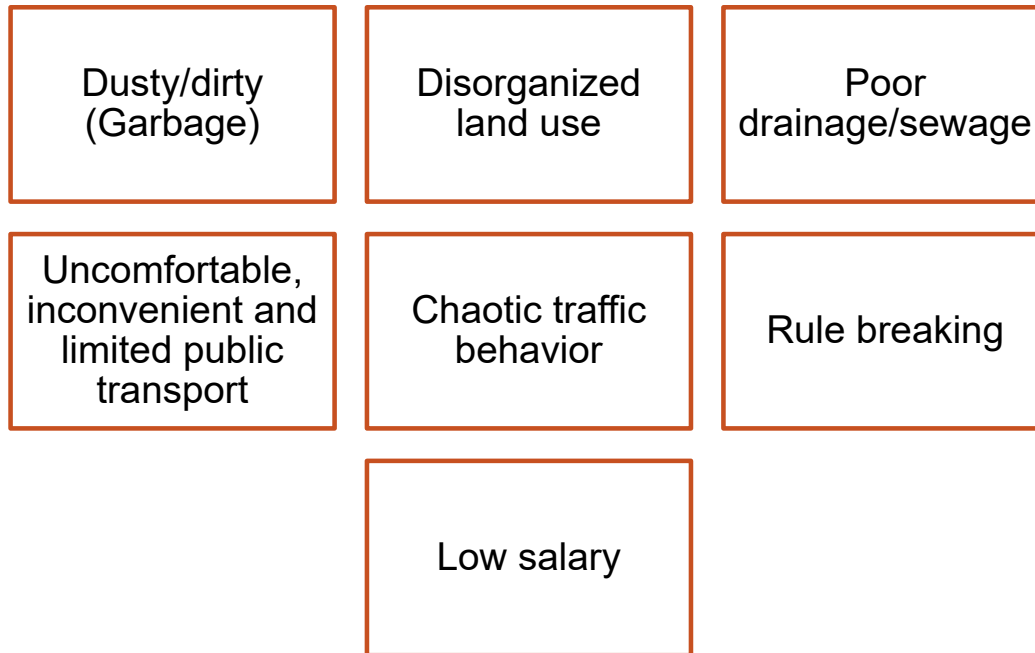
Relaxed

Center of
Education

Close to
Nature

Review of Last WG Meeting

Keywords on the Problems/Issues in Vientiane



Review of Last WG Meeting

Keywords on the Demand (Vision) for Vientiane

- to maintain the good aspects and address the problems and issues in Vientiane



Policy-Making Framework



	Desired Results	Guiding Principles
Overall	VISION What kind of city do we envision Vientiane to be in the future?	MISSION What is the role of the transport master plan in making the vision a reality?
Specific	GOALS What are defined and measurable objectives that should be achieved? When should they be achieved?	STRATEGIES How will we achieve the goals? What tactics should we include in the action plan?

The Project for Institutional Capacity Building for Sustainable Urban Transport System

5

List of Transport-Related Development Plans in VC

Title of Plan	Short Title	Author	Publication Year
① 9 th 5-Year National Socio-Economic Development Plan (2021-2025)	NSEDP	MPI	Sep. 2020 (rev. May 2021)
② Vision 2030 of Vientiane Capital	VC Vision 2030	Vientiane Capital	Aug 2018
③ 9 th 5-Year Vientiane Capital Socio-Economic Development Plan (2021-2025)	VSEDP	Vientiane Capital	Dec 2020
④ General Urban Plan of Vientiane Capital 2030	GUP	National Assembly	Nov 2020
⑤ Vision 2030 and 10-Year Development Strategy on Public Works and Transport Sector (2016-2025)	MPWT Vision 2030	MPWT	Dec 2016
⑥ 5-Year Development Plan of Public Works and Transport Sector (2021-2025)	MPWT Dev't Plan	MPWT	Dec 2020
⑦ Direction of 9 th Five-Year Plan of DPWT in Vientiane Capital (2021-2025)	DPWT Dev't Plan	DPWT VC	Mar 2021
⑧ Resolutions of Development of Vientiane Capital in 2020	Resolutions	Politburo of Central Party	April 2020
⑨ Vientiane Transport Master Plan 2008	VTMP 2008	JICA	Sep 2008

The Project for Institutional Capacity Building for Sustainable Urban Transport System

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List of Transport-Related Development Plans in VC

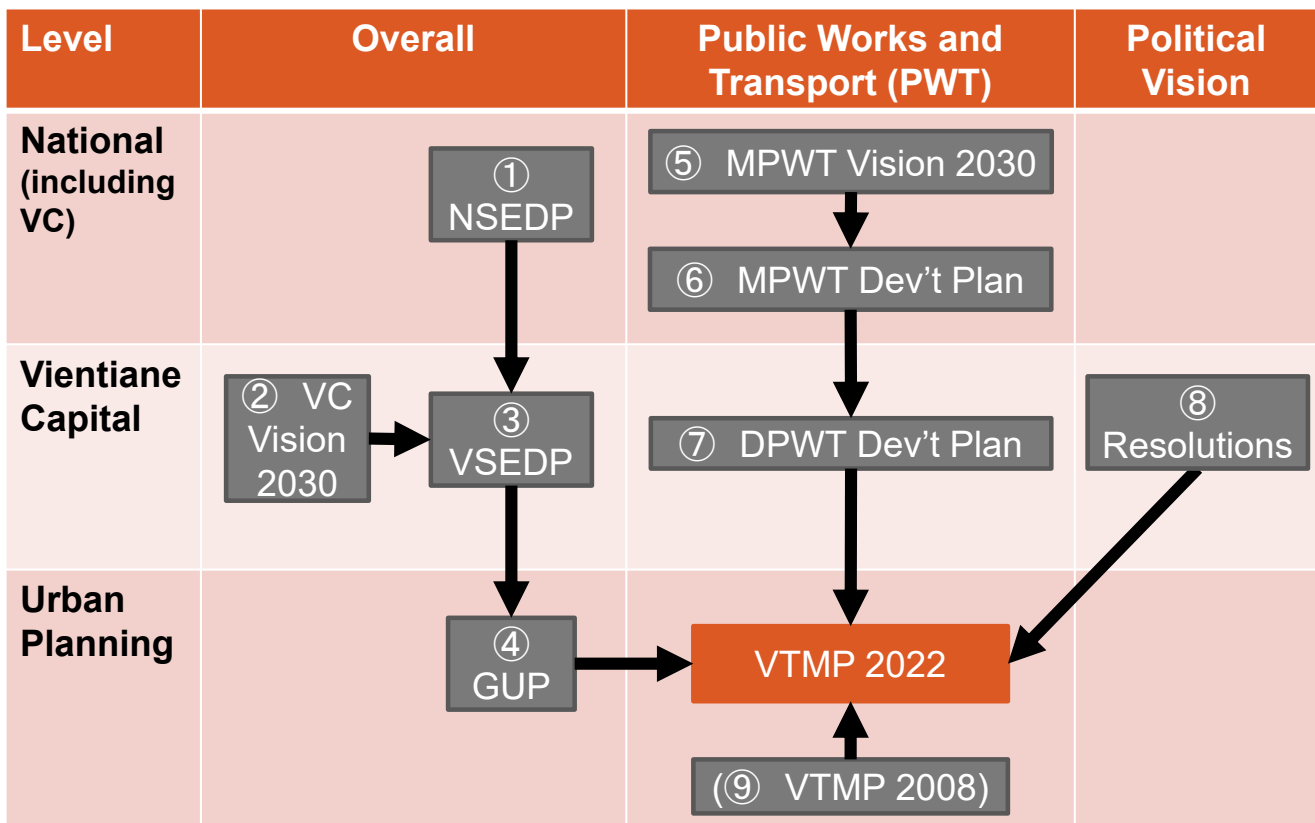
Publication Year and Target Year/s of Development Plans

Author	Plan	'08	...	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30
MPI	① NSEDP							●	■	■	■	■	■					
VC	② VC Vision 2030					●			■	■	■	■	■	■	■	■	■	■
	③ VSEDP							●	■	■	■	■	■	■	■	■	■	■
NA	④ GUP							●	■	■	■	■	■	■	■	■	■	■
MPWT	⑤ MPWT Vision 2030			●	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	⑥ MPWT Dev't Plan							●	■	■	■	■	■	■	■	■	■	■
DPWT	⑦ DPWT Dev't Plan								●	■	■	■	■	■	■	■	■	■
CP	⑧ Resolutions																	■
JICA	⑨ VTMP 2008	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

● Publication Year
■ Target Year/s

List of Transport-Related Development Plans in VC

Relationship Between Development Plans



Review of Vision, Plan, and Policy related to Transport in VC

① MPI / 9th 5-Year National Socio-Economic Development Plan (2021-2025)

Directions

- *High-Quality, Green, Sustainable, Focused Growth*

Focal Points related to Transport

- **Connected/Integrated:** Transform Laos from landlocked to land-linked country through implementing mega projects and constructing, upgrading, maintaining 2,800 km of transport infrastructure along economic corridors
- **Clean:** Promote the use of clean energy vehicles such as electric vehicles that use hydro/solar energy, to reduce fossil fuel imports and greenhouse gas emissions
- **Efficient/Effective:** Improve of public transport services in Vientiane through VCSBE Reform Project to ensure service quality and universal access for commuters
- **Smart/Modern:** Undertake feasibility study for a smart city in Nongpan Village in VC

Economic Targets

- Graduation from Least Developing Country (LDC) status
- Upper-middle income country by 2030:
 - 6.5-7% economic growth per year given a population growth rate of 1.7% per year
 - GDP per capita of US\$4,000

Transport Targets

- Growth of transport volume of goods and passengers at 8% per year
- Increase the share of clean energy vehicles to 14%
- Focus on achieving SDG 11 (sustainable cities and communities)

Review of Vision, Plan, and Policy related to Transport in VC

② Vientiane Capital/ Vision 2030 of Vientiane Capital

Vision 2030

Peaceful city in the new era in terms of politics, social order, economy, social environment, livelihood and sustainable development

Strategic Goals related to Transport

- **Efficient/Effective:** Smooth traffic flow with no congestion (sufficient transport infrastructure, public transport system responsive to people's needs, terminal and parking system for public and private vehicles, informational signages and PR activities)
- **Safe:** Public safety (road safety for drivers, passengers, cyclists, pedestrians, etc.)
- **Equitable:** Happiness/well-being (good health/welfare)

Targets

- Increase public transport use by 10% per year
- Reduce private vehicle share by 10% per year
- Increase bus terminals to 7 (5 sub-terminals and 2 large-scale terminals)
- Reduce work commuting time to no more than 45 mins
- Reduce speed limit to no more than 30 kph



Review of Vision, Plan, and Policy related to Transport in VC

③ Vientiane Capital/ 9th 5-Year Socio-Economic Development Plan of VC (2021-2025)

Focal Points related to Transport

- **Modern, Efficient/Effective, Safe, Equitable:** Improving the public transport system to be more modernized, quick and safe, meet the needs of the people and reduce the gaps in accessing infrastructure and services
- **Connected/Integrated:** Link infrastructure internally and to other regions and countries to facilitate production, services, trade and investment

Transport Targets

- 72 million public transport passengers in 5 years
- Average of passenger traffic volume of 16.16 million people/km

Economic Targets

- Total GRDP of 84,916 bil. kip (2025)
- 7-8% economic growth per year
 - GRDP per capita of US\$8,750
 - Economic growth by sector:
 - Agriculture sector: 4-4.5% per year
 - Industry sector: 11.5% per year
 - Service sector: 6.5% per year

Mega Projects in Vientiane



Vientiane-Vang Vieng Expressway



Lao-China Railway (Vientiane Station)

Review of Vision, Plan, and Policy related to Transport in VC

④ National Assembly/ General Urban Plan of Vientiane Capital 2030

Goal

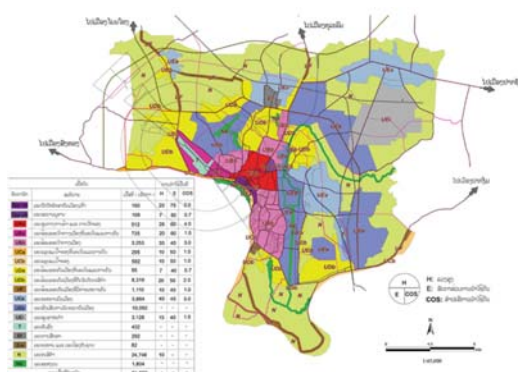
*Creation of a General Land Use Plan for the entire Vientiane Capital and Detailed Land Use Plans for the inner zone and historic area that are consistent with socio-economic development, **architectural preservation**, infrastructure development, and sustainability*

Development Directions

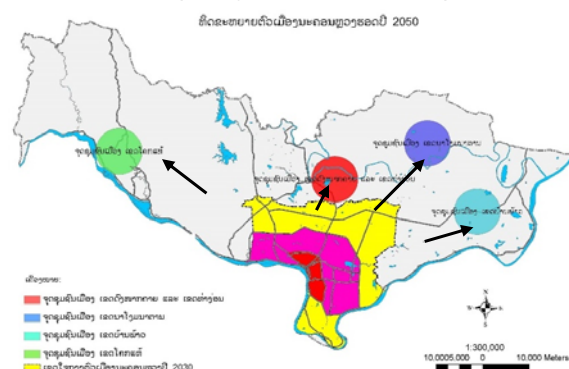
- **Livable, Sustainable, Smart, Urbanized** (same as Resolutions of Development in VC)

Contents of General Urban Plan

- Allocation plans for land use zoning, road network, drainage system, parks, green spaces



Urban Central Area from Present to 2030



Multi-Core Development
Expansion of Urban Central Area up to 2050

Review of Vision, Plan, and Policy related to Transport in VC

⑤ MPWT/ Vision 2030 and 10-Year development Strategy of PWT sector (2016-2025)

Vision 2030

Prioritize the development of the public works and transport sector as **highly effective, modern, safe, climate-resilient, integrated and sustainable**

Overall Directions

- **Safe, Efficient/Effective, Modern:** Upgrade/construct infrastructure and transport systems that are high-quality, safe, green, sustainable, and in line with ASEAN standards
- **Connected/Integrated:** Improve the capacity of domestic transport to be compete with neighboring countries and improve regional/international connectivity and integration



Sustainable and integrated
transport system



From landlocked to land-linked:
Integration and connectivity

Target

- 20% of public transport share in Vientiane Capital (in 2025)

Current Condition

- 1.4% of public transport share in the Study Area (in 2019)

Review of Vision, Plan, and Policy related to Transport in VC

⑥ MPWT/ 5-Year Development Plan (2021-2025)

Vision 2030

Prioritize the development of the public works and transport sector as **highly effective, modern, safe, climate-resilient, integrated and sustainable**

Overall Goals

- Regional connectivity, Internal Connectivity, Efficient transport services, Climate resilience, Safety, Sustainable Urban Development, Social development, Continued economic growth, Balanced socio-economic development, Environmental improvement

Programs

- **Connected/Integrated:** Infrastructure development for regional connectivity
- **Efficient/Effective:** Transport and logistics systems development
- **Smart, Modern, Urbanized:** Smart city development with comprehensive planning
- **Safe, Livable:** Road safety and traffic congestion improvement

Policy

- Transform the development model of public and transport infrastructure from wide to deep
- Improve transit services in terms of both quantity and quality by accelerating large-scale infrastructure projects such as railways, highways, transport systems, and transit stations

Targets

- 10% reduction in road accidents
- Annual GDP economic growth of at least 7%

Review of Vision, Plan, and Policy related to Transport in VC

⑦ DPWT/ Direction of 9th Five-Year Plan of DPWT in Vientiane Capital (2021-2025)

Development Directions

- Improvement and construction of road network and transport system to be **modern**, safe, comfortable, and convenient in line with sustainable development.
- Solving traffic congestion during the peak hours and illegal parking issues

Focal Projects

- Road and Bridge Management (23 projects with a total length of over 290 km)
- Transport and Vehicle Management
- Transport Infrastructure Enhancement

Target

- 30% reduction in road accidents



Equitable/Safe: Public Awareness on Road Safety and Promote Public Transport Use



Efficient/Effective: Public Transport Management Plan and Allocation of Service Areas

Connected/Integrated: Smart Urban Parking Projects

Review of Vision, Plan, and Policy related to Transport in VC

⑧ Politburo of Central Party/ Resolutions of Development of Vientiane Capital in 2020

Perspective regarding Transport

*To develop innovative and modern infrastructure and transport systems that are in line with ASEAN standards, in harmony with Lao architecture (**preserved**), and meets the needs of citizens*

Development Directions

- **Livable** city (**peaceful**, clean, green, bright, charming and civilized; no traffic congestion)
- **Sustainable** city (resilient, equitable, environment-friendly)
- **Smart** city (use of ICT and advanced technology)
- **Urbanized** city (modern infrastructure, integrated public transport)



Targets

- Approach a development level similar to ASEAN capital cities with moderate modernization by 2030 (Vientiane's 470th anniversary)
- GRDP per capita of US\$10,000 in 2025 and US\$15,000 in 2030

Review of Vision, Plan, and Policy related to Transport in VC

⑨ JICA, MPWT/ Comprehensive Urban Transport Master Plan in VC (VTMP 2008)

Vision

Clean and safe city with the functions of a modern capital

Targets to Realize the Vision

- **Efficient/Effective:** Smooth and safe traffic environment
- **Livable:** Good living environment
- **Safe, Equitable:** Safe and convenient transport for disadvantaged people
- **Urbanized:** Excellent urban amenities

Strategies to Attain the Targets

- **Connected/Integrated:** Development of transport network
- Improvement and upgrade of public transport system
- Improvement of traffic management
- Improvement of urban and traffic environment

Targets

- Convert 40% of motorcycle and private car trips to public transport by 2025
- Procure 352 bus units to achieve target modal shift
- Implement 50 road projects, 5 bridge projects and 7 intersection improvement projects

Target Years:

Short-term: 2009-2013

Medium-term: 2014-2018

Long-term: 2019-2025



Proposed Short-, Medium- and Long-Term Projects

Vision

Common Keywords in Development Plans

Connected/ Integrated	Urbanized	Clean	Equitable
Efficient/ Effective	Safe	Livable	Resilient
Smart	Modern	Preserved (Architecture)	Peaceful

Keywords in Existing Plan

	①	②	③	④	⑤	⑥	⑦	⑧	⑨
Keyword	NSEDP	VC Vision 2030	VSEDP	GUP	MPWT Vision 2030	MPWT Dev't Plan	DPWT Dev't Plan	Resolutions	VTMP 2008
Connected/Integrated	✓		✓		✓	✓	✓		
Urbanized				✓				✓	
Clean	✓								✓
Equitable	✓	✓	✓	✓	✓	✓	✓	✓	✓
Efficient/Effective	✓	✓	✓		✓	✓	✓		✓
Safe		✓	✓		✓	✓	✓		✓
Livable				✓				✓	
Resilient					✓	✓			
Smart	✓			✓			✓	✓	
Modern			✓		✓	✓	✓	✓	✓
Preserved (architecture)								✓	
Peaceful		✓							

Vision

Keywords on the Demand (Vision) for Vientiane from last WG meeting

Green Mobility
(clean)

Livable City

Eco-Friendly

Safe City
(reduce accidents and congestion)

Good Traffic Safety Awareness

Good Enforcement of Traffic Rules

Vision

Common keywords in development plans

- Connected/ Integrated
- Urbanized
- Clean
- Equitable
- Efficient/ Effective
- Safe
- Livable
- Resilient
- Smart
- Modern
- Preserved (Architecture)
- Peaceful

Suggested keywords at the last WG meeting

- Green Mobility (clean)
- Livable City
- Eco-Friendly
- Safe City (reduce accidents and congestion)
- Good Traffic Safety Awareness
- Good Enforcement of Traffic Rules



Vision and Mission



Vision

Proposed Vision

Towards an accessible, livable and sustainable city for everybody in 2040



What kind of city do we envision Vientiane to be in the future?

Mission

Proposed Mission

Create an inclusive, sustainable and modern urban transport system along with a joyful walkable environment



What is the role of the transport master plan in making the vision a reality?

Sustainable (Inclusive, Eco-Friendly, Economical)



Hindustan Times

Polluted city partly due to car emissions (New Delhi)



Barrier-free public buses (Japan)



Inclusive urban cable car transport for poor areas (Medellin)



Københavns Kommunes

Focus on sustainable PT and NMT modes (Copenhagen)



Land Transport Guru

Low-emission electric bus fleet (Singapore)



Arch Daily

Free public transport (Luxembourg)

Modern (Public Transport System)



Phil. Star

Long passenger waiting time (MRT-3 in Manila)



Medium-sized bus for narrow roads (Mu Bus in Tokyo)



Maas (Mobility as a Service)



Scheduled bus service (Airport Shuttle in Vientiane)



Rappler

Use of clean and small vehicles (E-jeepneys in Manila)



The Bogota Post

High-capacity BRT (Transmilenio in Bogota)

Joyful Walking Space (Walkable)



Inappropriate use of sidewalk and bus stop (Vientiane)



Rearrangement of road component (Kobe)



Promenade and car-free road along the riverside (Vientiane)



Improvement of sidewalk and parking space (Vientiane)



Covered pedestrian walkway connecting buildings (Manila)

Joyful Walking Space (Enjoyable)



Crowded station during rush hour (BTS in Bangkok)



Night market along the street (Luang Prabang)



Pedestrian paradise on weekends (Ginza)



Boulevard and park by the river (Phnom Penh)



Restored and preserved historical station (Tokyo)



New bus terminal at Lao-ITECC Mall (Vientiane)

Setting Goals and Strategies Stage

Based on the Vision and Mission, Goals and Strategies will be discussed in the following activities.

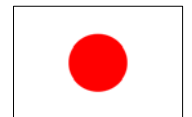


GOALS

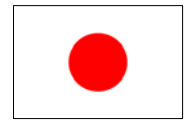
What are defined and measurable objectives that should be achieved? When should they be achieved?

STRATEGIES

How will we achieve the goals? What tactics should we include in the action plan?



Thank you



The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

4th Joint Coordination Committee (JCC) Meeting

1st December 2021

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



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- 1. Review of the Project**
- 2. Progress of the Project**
- 3. Schedule**
- 4. Project Design Matrix**

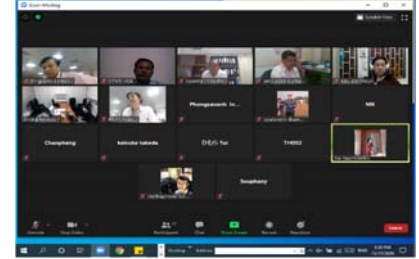
2. Progress of the Project

Working Group Offline/Online

Each Working Group was carried out through Online meeting during COVID-19 immigration restrictions. Offline Working Group has restarted since the declaration lifted.



Second Technical Working Group



Online Working Group Session



Offline Working Group Sessions



Training



Site Survey

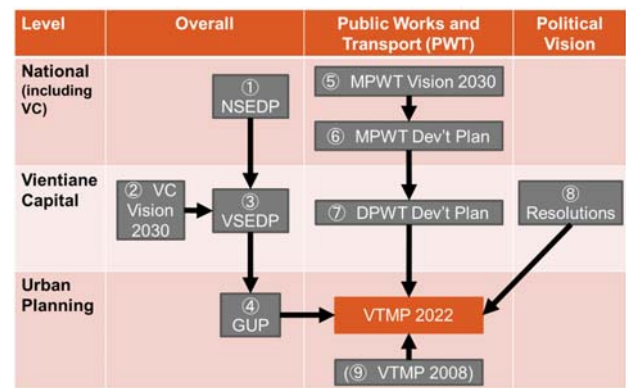
WG1,2 Transportation Policy/Urban Transport Plan

WG Record

1	7, April, 2021		
2	21, April, 2021		
3	18, Nov, 2021		

Contents of WG meeting

- Discussion on keyword of advantages and issues in Vientiane
 - Advantage: Green, Good old townscape, Relaxed, Close to Nature
 - Issues: Uncomfortable, inconvenient and limited public transport, Chaotic traffic behavior
- Review existing plans related to transport
 - The Master Plan should be consistent with National, VC, Urban Planning Levels
- Vision and Mission
 - Determine the vision and mission with the keywords form existing plans and discussion



Structure of Existing Plan

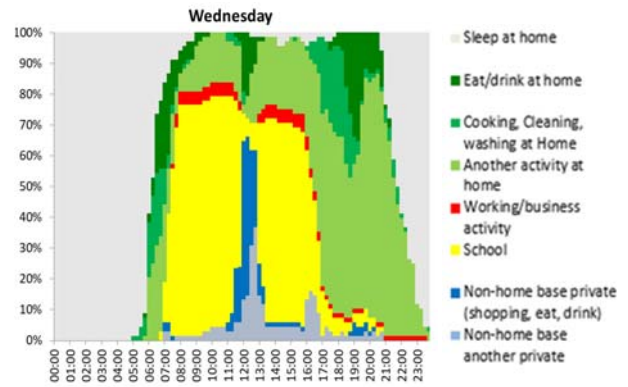
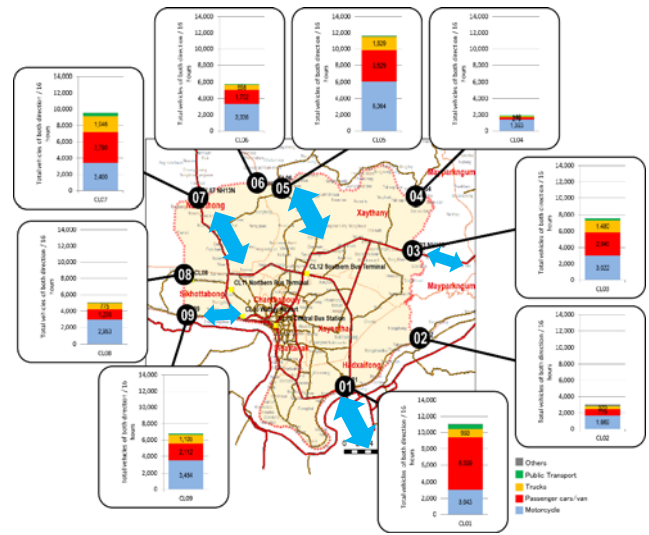
WG5 Traffic Demand Forecast/Traffic Survey

WG Record

1	5, Feb, 2021	7	13, May, 2021
2	2, Mar, 2021	8	21, May, 2021
3	10, Mar, 2021	9	16, Jun, 2021
4	17, Mar, 2021	10	24, Jun, 2021
5	23, Apr, 2021	11	6, Jul, 2021
6	7, May, 2021	12	14, Jul, 2021

WG Activities and Outputs:

- Analysis of ADS survey results
 - Targeting students for a future MM campaign is recommended
- Discussion of traffic survey results
 - On average, 2019 peak traffic volume of passenger cars increased by approx. 4.4%, while buses decreased by 14.1% in comparison to 2007
- Discussion of COVID-19 impact traffic survey results
 - On average, traffic volumes were found to vary within 10% of 2019 levels
- Introduction to traffic demand forecasting
 - Key concepts and an introduction to traffic demand forecast was reviewed (Part 2 pending)



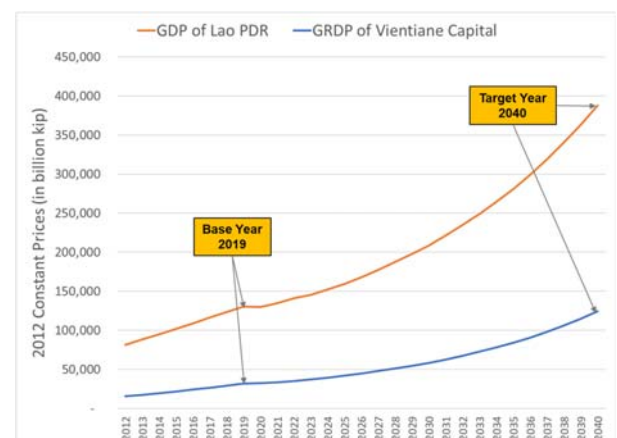
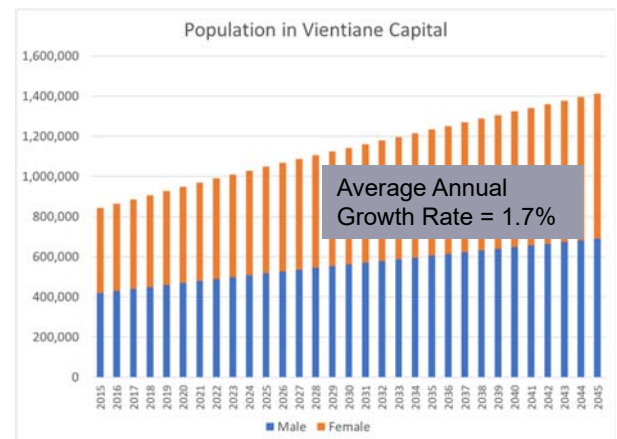
WG6 Socio-Economic Analysis

WG Record

1	12 August 2019	5	12 May 2021
2	3 October 2019	6	20 May 2021
3	17 February 2020	7	24 Nov 2021
4	6 May 2021		

Contents of WG meeting

- Lectures about Key Concepts and Methods of Socio-Economic Analysis
 - Key concepts on population, GDP, GRDP and forecasting methods were introduced
- Review of Socio-Economic Data
 - Available socio-economic data and reports were identified and collected, and their contents, assumptions and relevance were reviewed
- Preparation of Current Framework
 - Population, GDP and GRDP for the base year was prepared based on collected data
- Building a Consensus about Future Socio-Economic Framework within WG6
 - Assumptions for the future socio-economic framework were agreed upon based on trends



WG8 Geographic Information System (GIS)

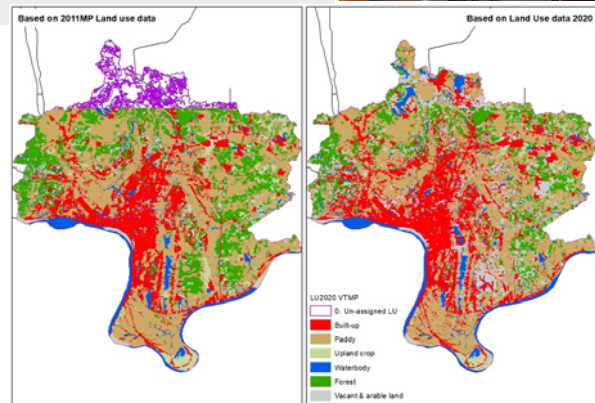
WG Record

No	Date	Contents
1	25 Jun, 2019	Outline of WG8 (together with WG10)
2	5 Nov. 2019	GIS for transport planning
3	28 Nov. 2019	QGIS software overview
4	6 Feb. 2020	QGIS refresher training
5	11 Feb. 2020	GIS data editing (Basic 1)
6	21 Jul. 2021	Current Land Use and Findings (together with WG10)
7	28 Jul. 2021	QGIS refresher training/ GIS data editing (Basic 2)
8	3 Aug. 2021	GIS data error check/ Cleaning
9	10 Aug. 2021	Basic Spatial Analysis



WG Activity

- Utilization of GIS as a tool for urban transport planning
 - Understand GIS for urban transport planning
 - Data collection/ preparation (data editing)
 - Spatial analysis
 - Visualization of data (create maps)
 - Provision series of GIS trainings
- Land-use data is updated based on available sources as a part of data collection



WG9 Environmental and Social Considerations

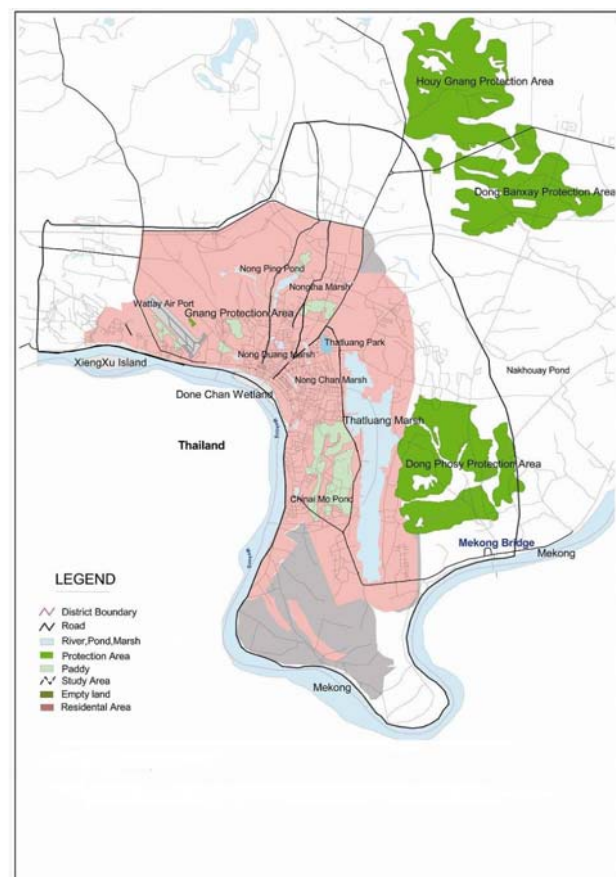
WG Record

1	29, Sep, 2021	4	20, Oct, 2021
2	6, Oct, 2021	5	
3	13, Oct, 2021	6	

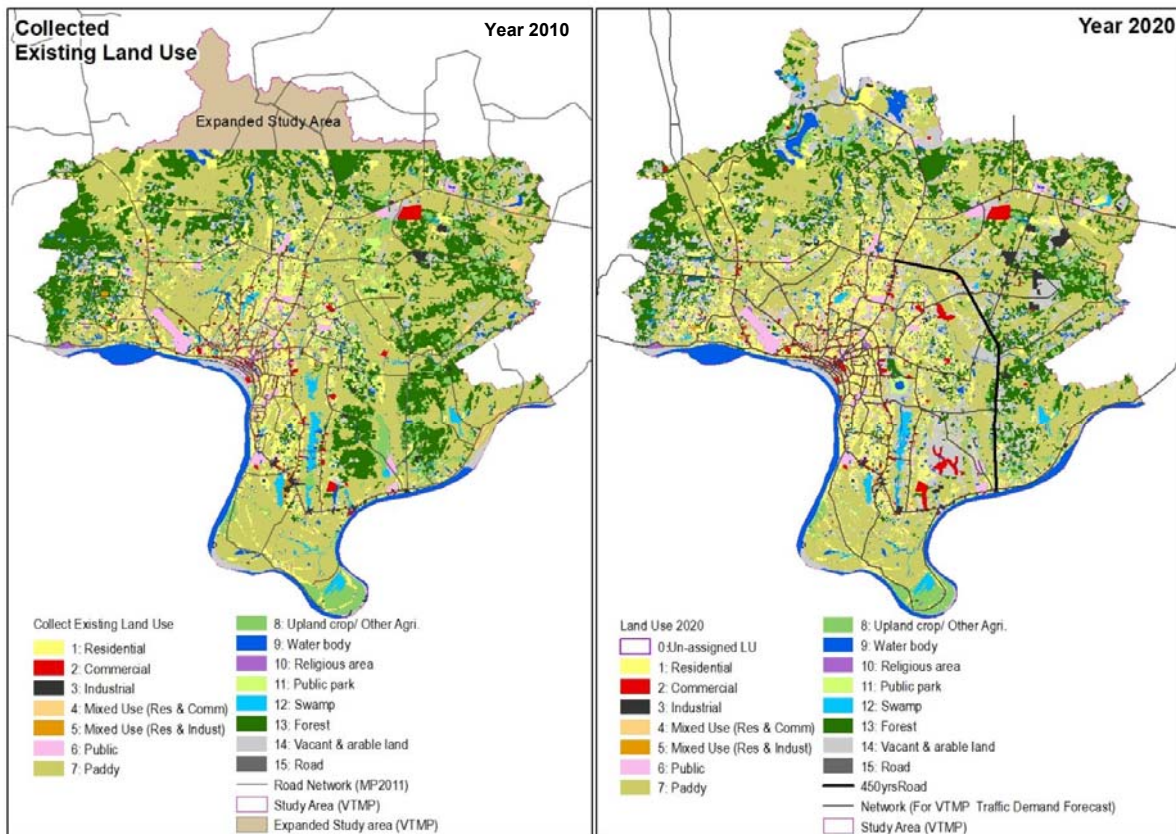
Protected Areas and Marsh across Vientiane Capital (as of 2010)

Houy Gngang PA
 Dong Banxay PA
 Dong Phossey PA
 Gngang PA

Nong Ping Pond
 Nongtha Marsh
 Nong Duang Marsh
 Nong Chang Marsh
 Chinai Mo Pond



WG9 Environmental and Social Considerations



WG9 Environmental and Social Considerations

➤ Strategic Environmental Assessment (SEA) for VTMP

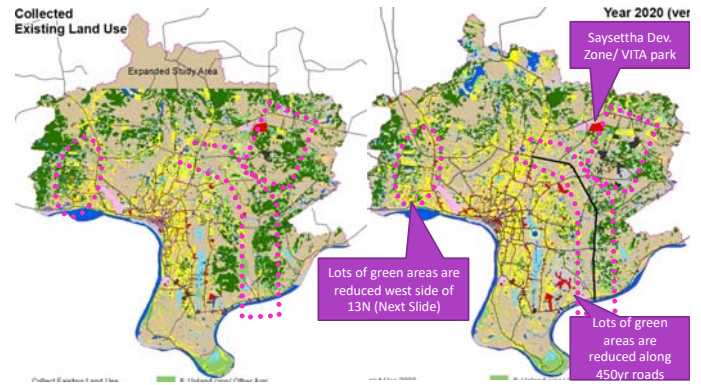
SEA-related Legal Framework in Lao PDR

- Environmental Protection Law No:29/NA (18 Dec 2012), Article 19 (Revised version) approved by President of the National Assembly
- Decision on SEA, No 0483/ MoNRE (06 Feb 2017), approved by Minister of MoNRE
- Guideline on Strategic Environmental Assessment, approved by Minister of MoNRE No. 6616/MONRE (31 Dec 2018)
- ◆ Implement Participatory SEA of VTMP (Dec/2021 – June/2022)
 - Held 4 SEA-related Workshops at WG9 (Sep/2021 – Oct/2021)
 - SEA-ToR Development (Oct/2021 – Nov/2021)
 - SEA Consultant Selection (Nov/2021)

WG10 Urban development/Land Use/ Legislation

WG Record

1	21, Jun, 2019	7	16, Sep, 2021
2	03, Oct 2019	8	29, Sep, 2021
3	27, Jan, 2020	9	13, Oct, 2021
4	3, Feb 2020	10	28, Oct, 2021
5	21, Jul 2021	11	11, Nov, 2021
6	09, Sep, 2021	12	18, Nov. 2021



WG Activity and Outputs

- Update land-use data
→ Land-use data is updated by members effort.
- Land-use plan and orientation
→ Understood concept of the Vientiane land-use plan.
- Characteristic of land-use change from 2010 -2020
→ Typical changes are summarized.(Fig)
- Preparation of development scenarios
→ 5 scenarios for population projection are prepared and selected.

Area	Population (2019)	Scenario 1 Current Trend Modified	Scenario2 Average Growth	Scenario 3 Sub Center development	Scenario 4 Sub Center +Outer Urban Oriented	Scenario 5 Moderate development
Historic Conservation	14,200	15,800	20,700	15,800	15,800	15,800
Inner Urban Zone	224,900	249,700	327,100	249,700	249,700	249,700
Outer Urban Zone	187,600	349,000	347,800	231,200	386,300	315,100
Outskirts Zone	174,500	324,600	272,900	215,100	238,600	238,600
Su KM21	31,200	47,300	45,400	117,100	64,300	86,900
b- Thanaleang	12,100	18,300	17,600	45,400	24,900	33,700
ce Dongdok	34,600	52,400	50,300	129,800	71,300	96,400
nthe Naxaithong	5,800	8,800	8,400	21,800	11,900	16,200
r Railway Town	7,200	10,900	10,500	27,000	14,800	20,100
Tha Ngon	4,900	5,400	7,100	5,400	7,400	6,000
Target Area Total	692,074	1,076,800	1,006,700	1,052,900	1,077,600	1,072,500
Urban Cluster	10,500	11,700	15,200	11,700	15,900	12,300
Outside of the urban Area	235,649	261,700	342,700	261,700	290,400	261,700
Vientiane Capital(Total)	927,723	1,338,500	1,349,400	1,314,600	1,368,000	1,334,200

WG11 Pilot Project

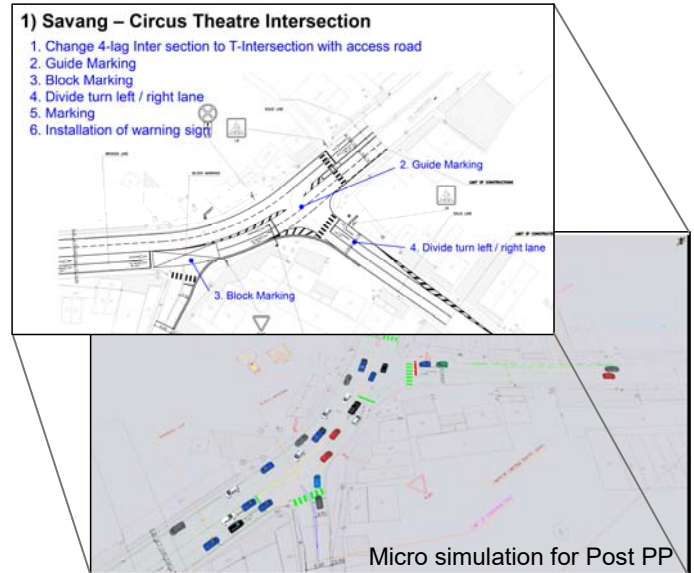
WG Record

1	27, June, 2019	7*	Mar, April, 2021
2	3-15 Sep, 2019	8*	Aug, 2021
3*	15, Jan, 2020	9	12, Aug, 2021
4*	21, Jan, 2020	10	
5*	16, Nov, 2020	11	
6*	27, Nov, 2020	12	

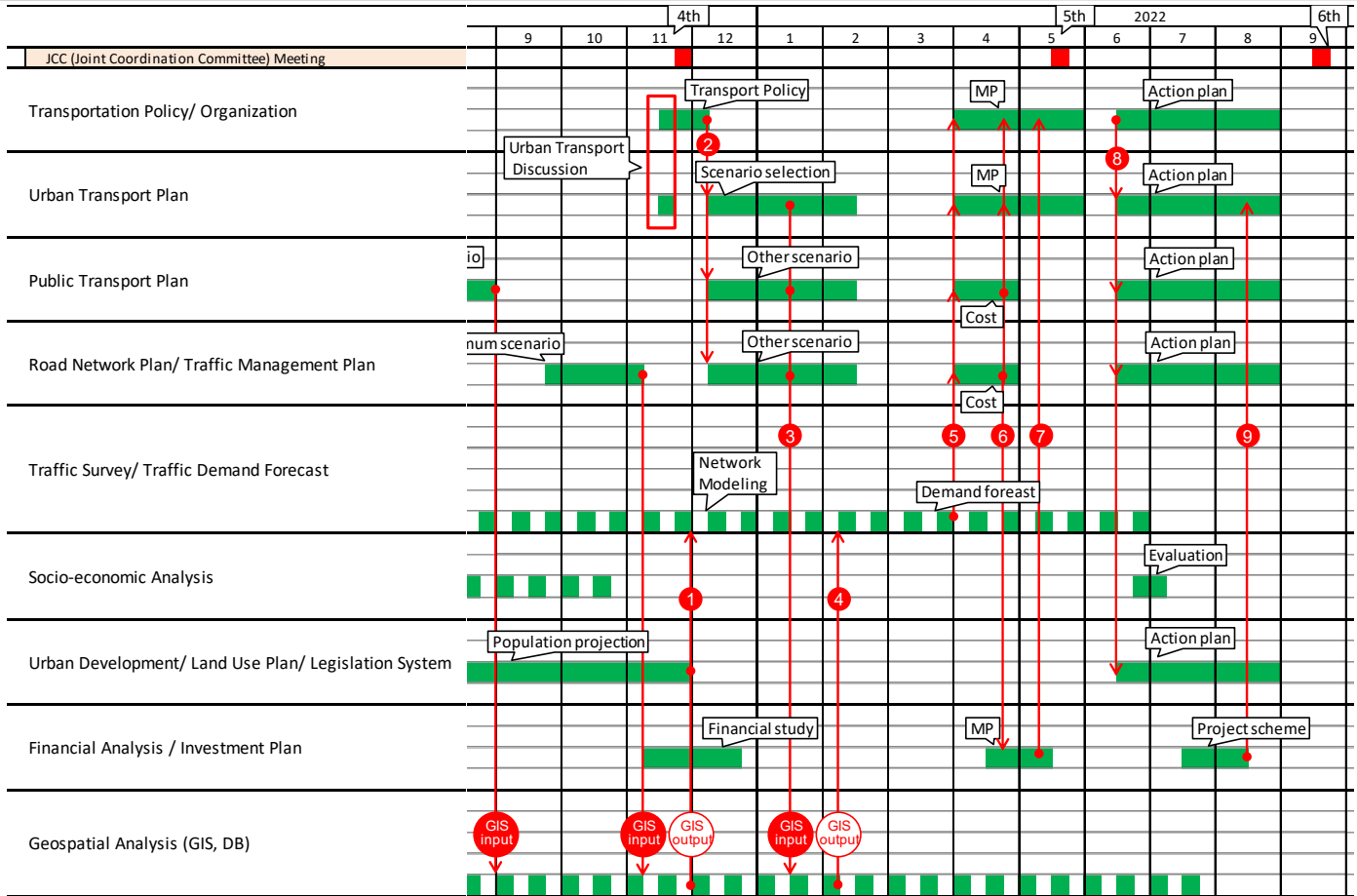
*Small WG with specific member

< Contents of WG >

- Prioritization for Pilot Project(PP)
→ Prioritization based on google traffic and queue length survey done by WG member
- Explanation of general measures
→ Measures to solve traffic congestion.
- Candidate Location for PP
→ Decide Location for PP and plan exact measures.
- Micro simulation
→ Pre-Post micro simulation was demonstrated



3. Schedule



4. Project Design Matrix

Target year 2035 -> 2040

【Project Purpose】 The capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane are upgraded, and their administrative and managing capacities for implementing urban transport policies from the MP are strengthened.

1. C/Ps who attended serial training sessions on urban transport MP formulation improve their understandings on the issues, and achieve over 70% on the post-training test scores
2. C/Ps who attended training (s) on the project implementation manual improve their understandings, and achieve over 70% on the post-training test scores
3. MPWT, DOT or any other relevant institution officially approves the urban transport MP and action plan ("any other relevant institution" which is responsible for approving the MP and action plan" to be identified, if any).

【Output 1】 The mechanism for discussing and sharing the views on the issues of urban transport is established.

1. More than 3 issues identified during the initial stage of in the Project are discussed in the meetings of the CTMC
2. More than 3 issues identified during the initial stage of in the Project are dealt by related institutions with follow-up activities

4. Project Design Matrix

【Output 2】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

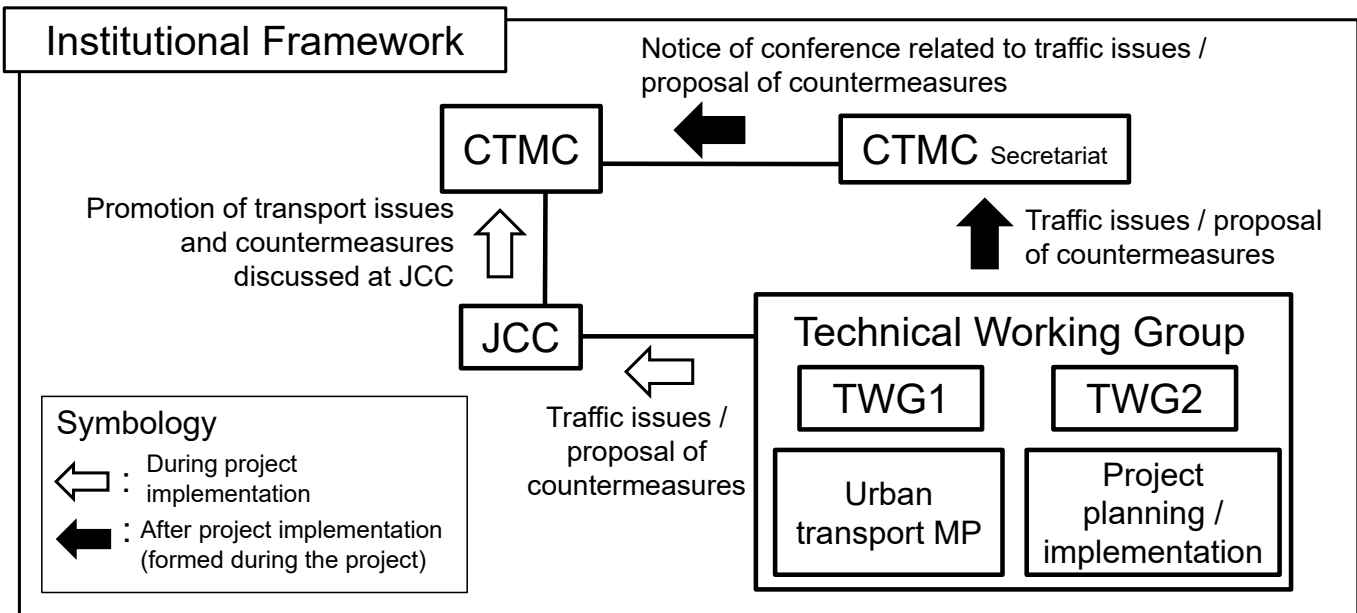
1. More than 18 C/Ps receive training on formulating the urban transport MP
More than 70% of the C/Ps receive training on formulating the urban transport master plan
2. An urban transport MP for Vientiane Capital is formulated by updating the year 2008 version.

【Output 3】 Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

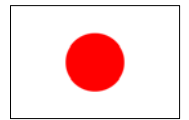
1. More than 3 C/Ps play specific roles in the planning and implementation of the pilot projects
2. More than 18 C/Ps receive training on the project implementation manual
More than 70% of the C/Ps receive training on the project implementation manual
3. Urban traffic-related indicators improve on average by X% in pilot project areas ("urban traffic-related indicators" and X: to be identified when the pilot project is decided).

4. Project Design Matrix

Activities for “Strengthen Institutional Capacity”

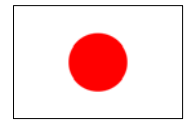


- Counterparts and Project team work together in the TWG and report transportation issues to JCC.
- JCC reports the result of discussion to CTMC and CTMC makes decision for next action.



Thank you





The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

5th Joint Coordination Committee (JCC) Meeting

14th September 2022

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



CONTENTS

- 1. Review of the Last JCC**
- 2. Development Plan**
- 3. Scenario Selection**
- 4. Action Plan**

1. Review of the Last JCC

Vision

Towards an accessible, livable and sustainable city for everybody in 2040

What kind of city do we envision Vientiane to be in the future?

Mission

Create an inclusive, sustainable and modern urban transport system along with a joyful walkable environment

What is the role of the transport master plan in making the vision a reality?

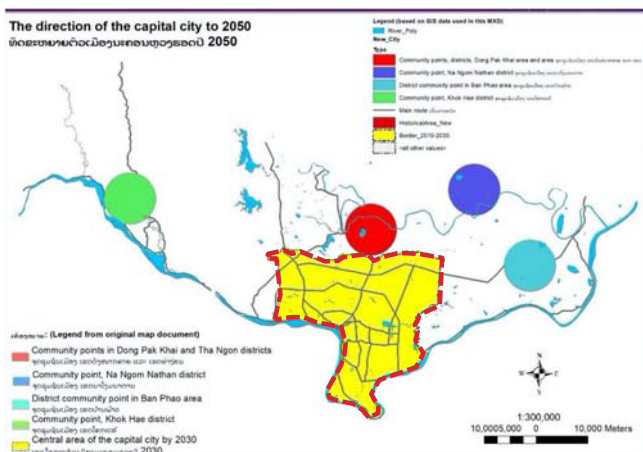


2. Development Plan

Urban development plan

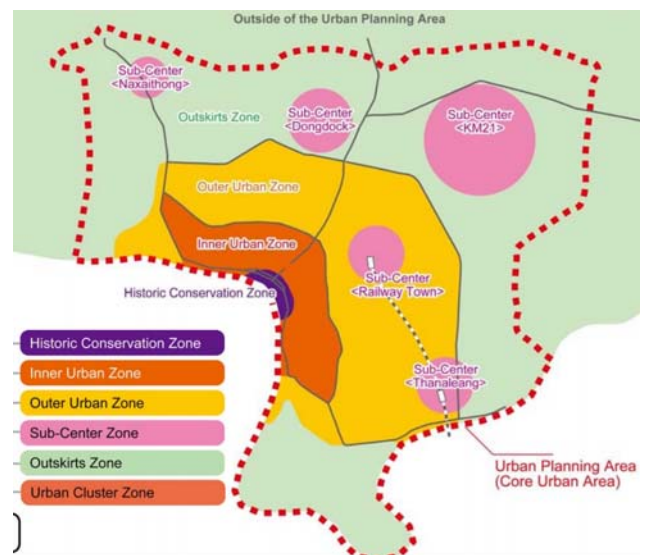
- Sub-centers in “Outer Urban Zone” and “Outskirt Zone” are planned to be developed.
 - Require **strategic harmonization with trunk PT services for TOD**
 - Enhance **the re-structure of monocentric urban structure** in Vientiane

Need to be considered in Future PT Network Planning



Multi Core Town Development

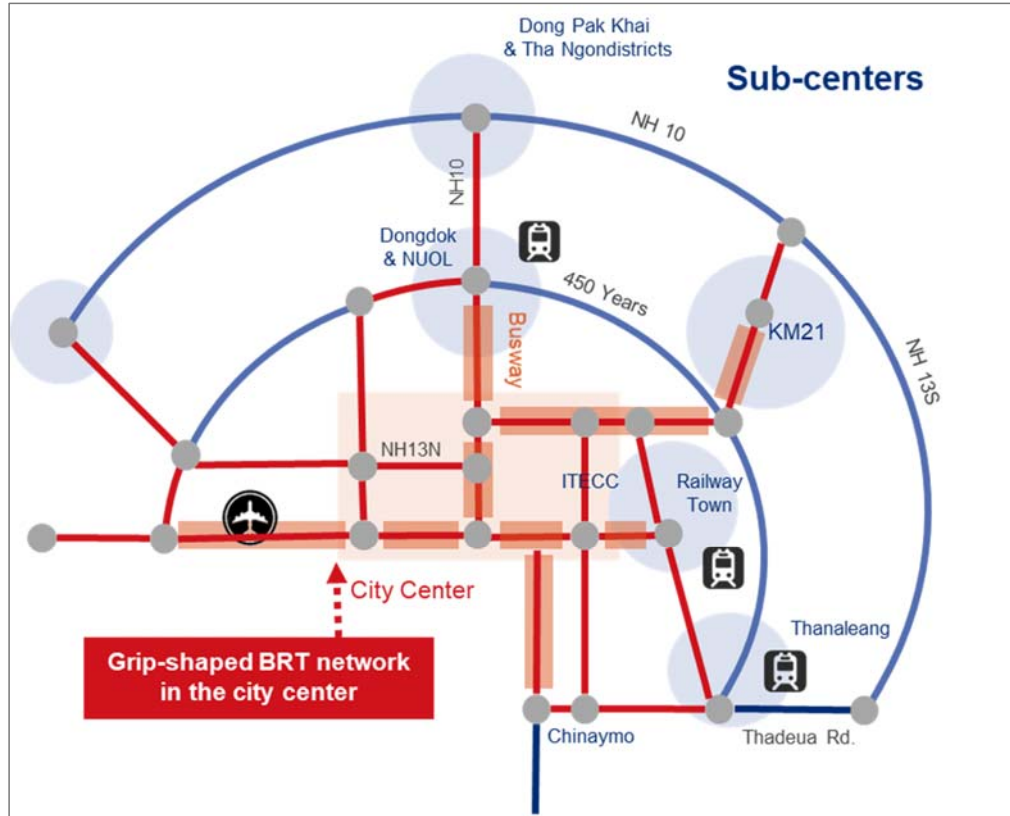
Note: Current Urban Planning Area has been expanded



Sub Center Development

2. Development Plan

The Network Need to be Enhanced



3. Scenario Selection

Scenarios (Agreed in the last TWG)

Scenario 1

- Do minimum

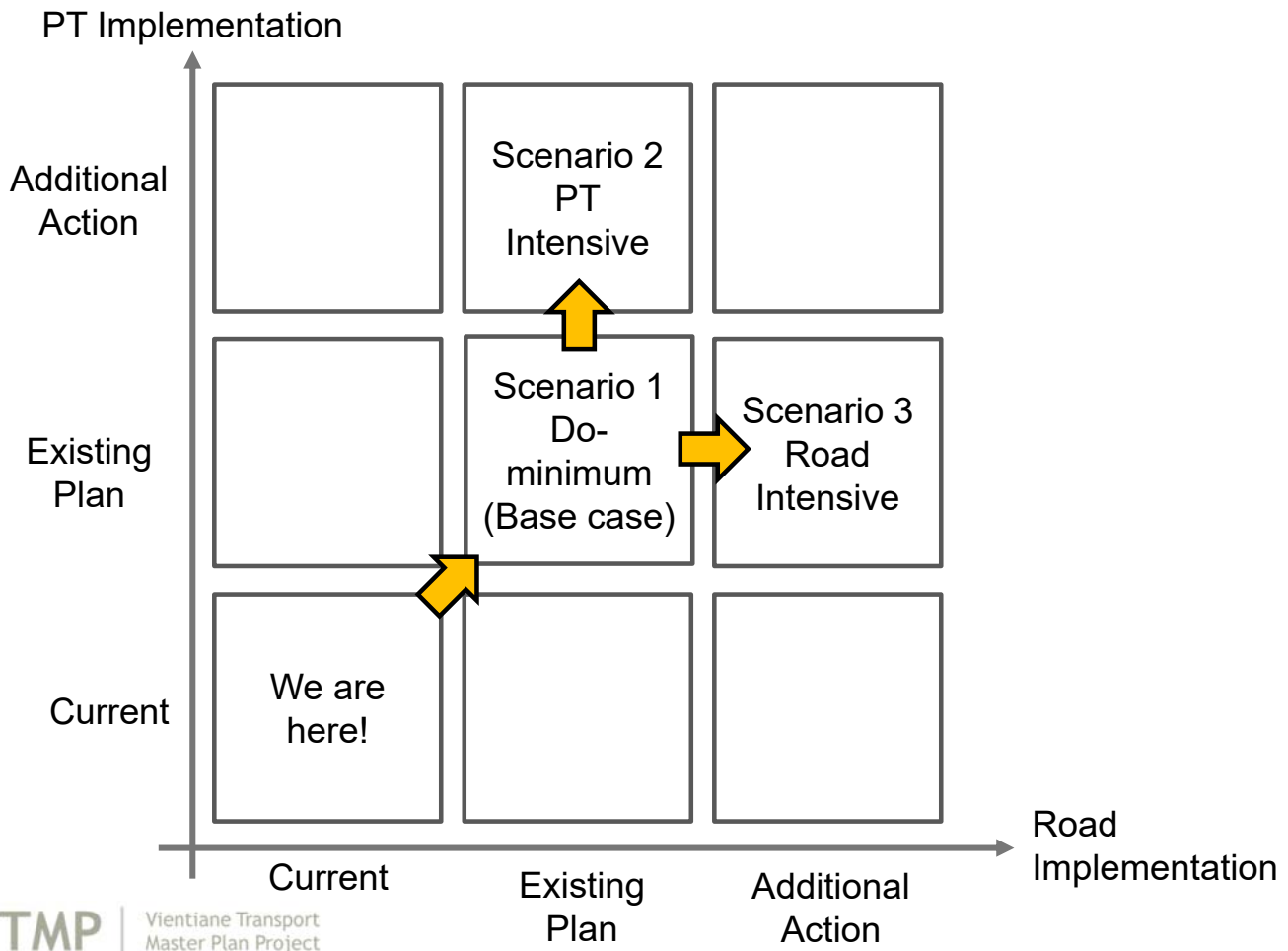
Scenario 2

- Public Transport Intensive

Scenario 3

- Road Intensive

3. Scenario Selection

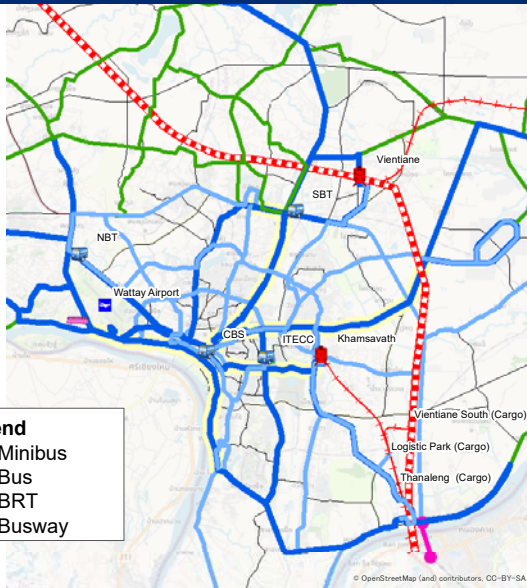


Scenario Selection

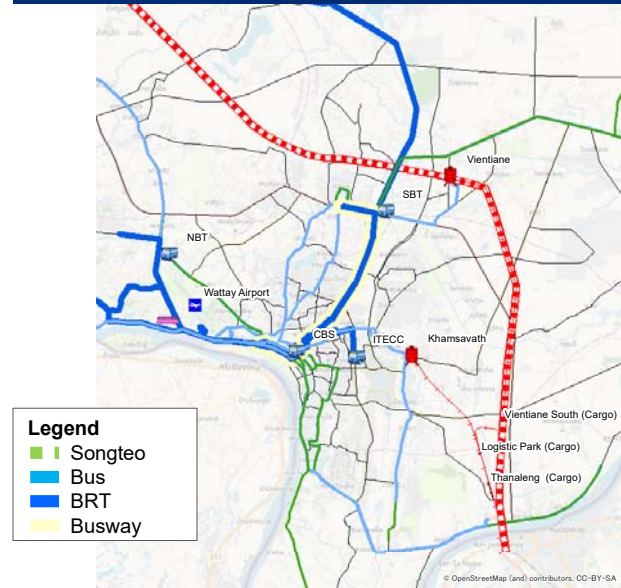


3. Scenario Selection

Scenario 2 Public Transport Intensive



Scenario 3 Road Intensive



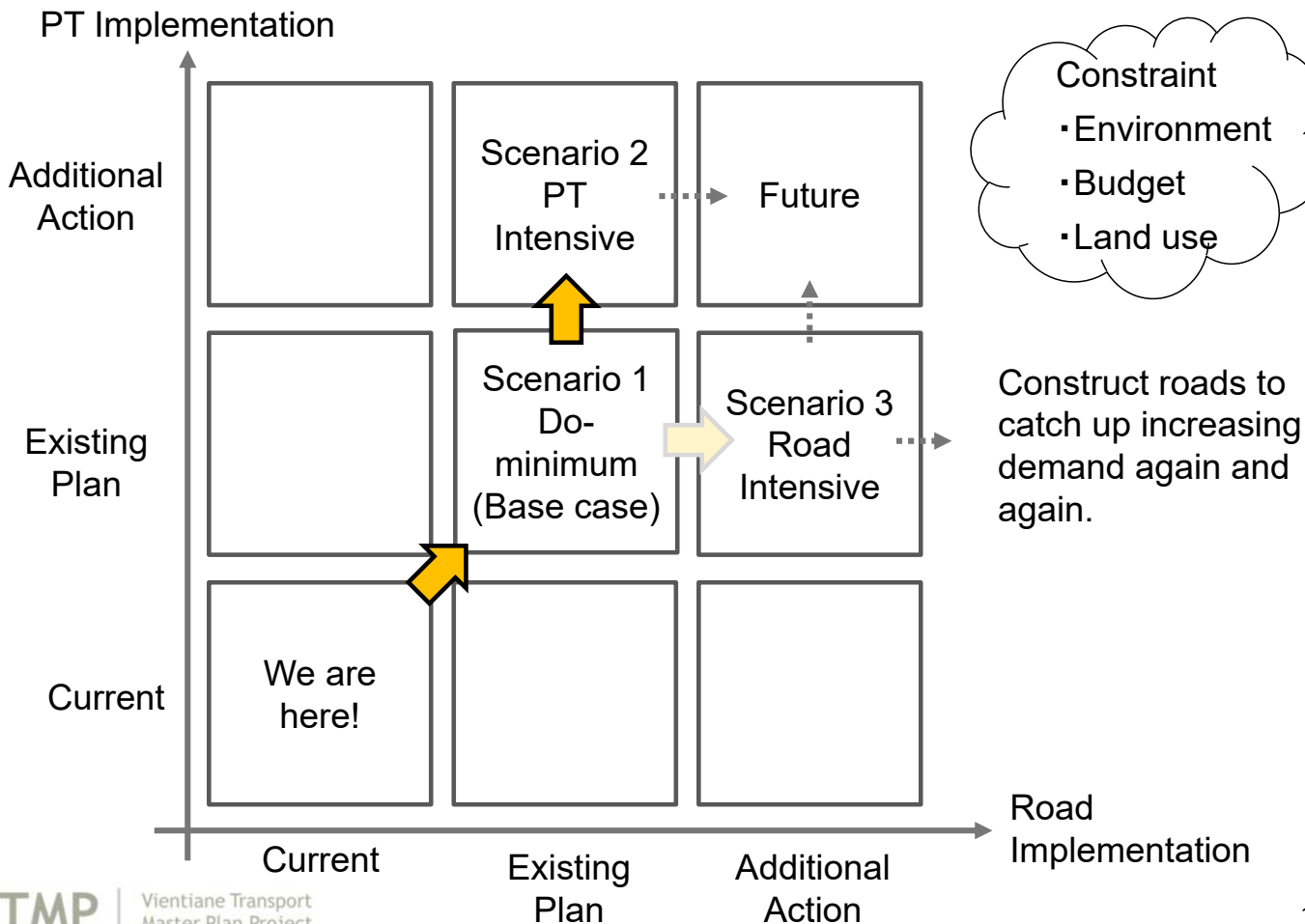
Which network is fit to the Vision and Mission?



Scenario 2

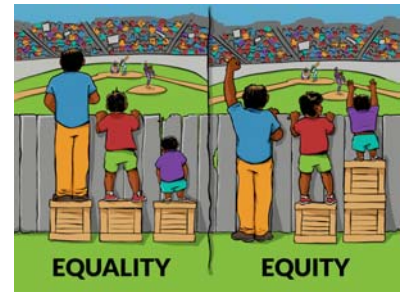
Public Transport Intensive

3. Scenario Selection



3. Scenario Selection

- What happen if you choose demand follow type development.
 - Need to keep expanding road capacity
 - Land acquisition for widening will increase.
 - Higher construction costs such as flyovers will be required.
 - Few options for people who do not have vehicles
 - Inclusive society will be hampered.



Dhaka, Bangladesh



Source: <http://www.dhakatribune.com/op-ed/2015/jan/31/true-cost-cars>

Ho Chi Minh City, Vietnam



Source (Picture): <http://peteralanlloyd.com/back-part-2/related-regional-articles/ho-chi-minh-city-saigon-by-any-other-name/>
Source (Movie): tkimsing <https://www.youtube.com/watch?v=azxQx1tX-0o>

Hanoi City, Vietnam



Jakarta, Indonesia



Source: <http://www.brilio.net/life/8-keuntungan-jika-kamu-tak-hidup-di-jakarta-keuntungan-tak-tinggal-di-jakarta-1504251.html>

Shenzhen city, China



<http://www.telegraph.co.uk/news/worldnews/asia/china/9578774/Gridlock-as-China-begins-its-Golden-Week-holidays.html>

Bogota, Colombia (Public transport-oriented City)

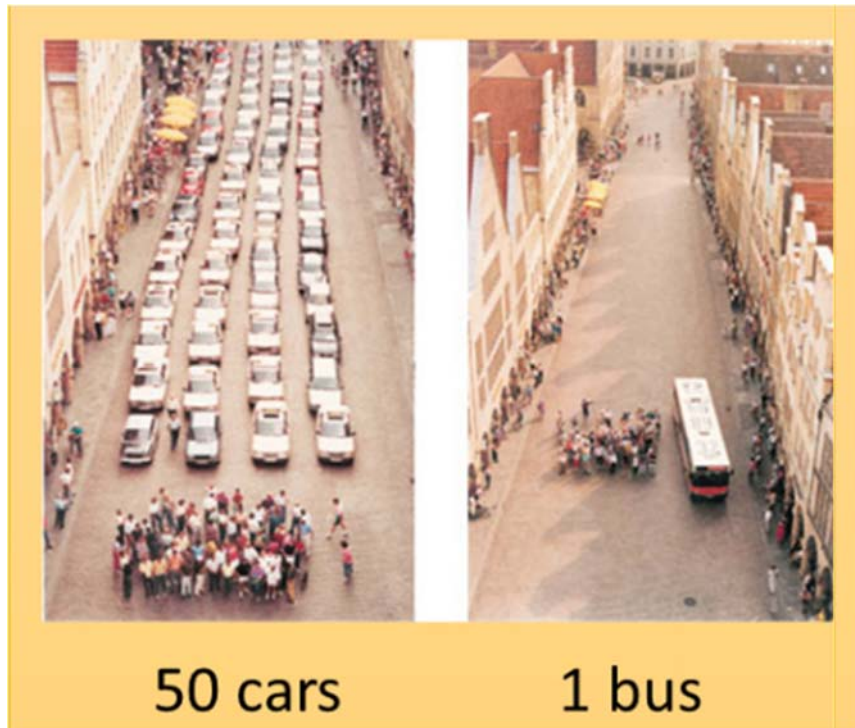


Tokyo M., Japan (Public transport-oriented City)



3. Scenario Selection

Road Occupancy



4. Action Plans for Scenario 2

1. Sectoral Approaches in Urban transportation strategy

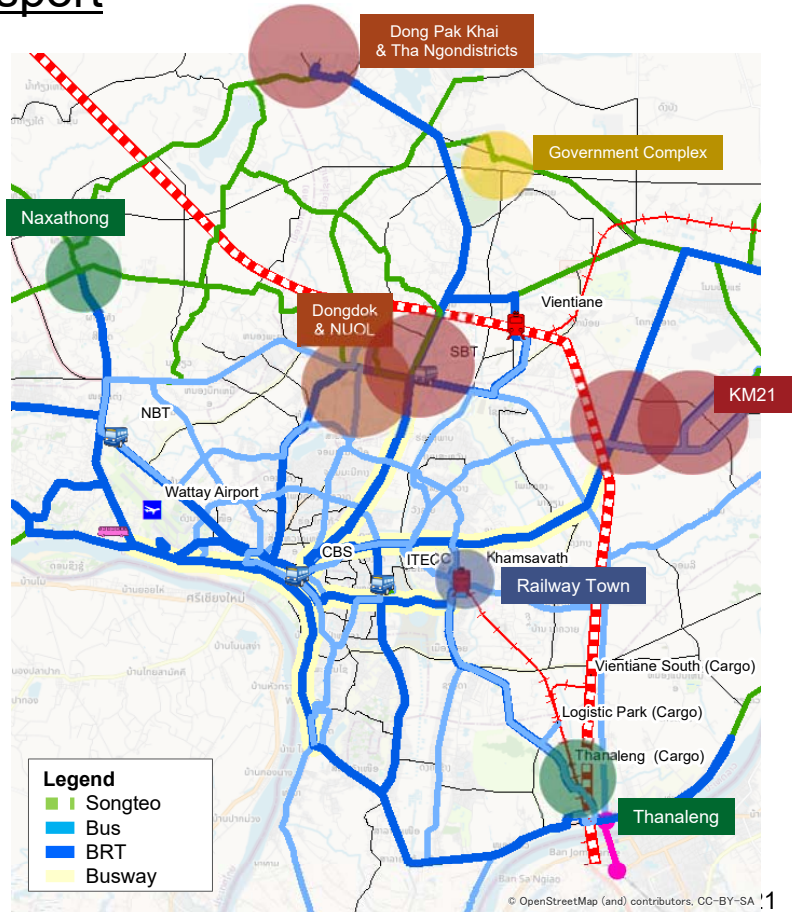
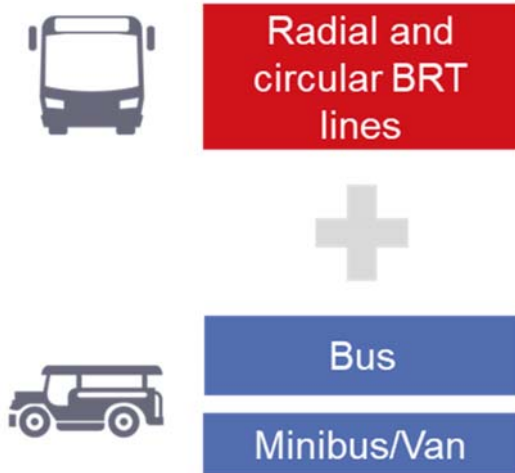
Approaches to sectors of:

- a. Public transport,
- b. Road network and traffic management,
- c. Pedestrian,
- d. NMT: Non-motorized transport,
- e. Elderly, physically challenged, and others with transportation difficulties, and
- f. Behavior change

4. Action Plans for Scenario 2

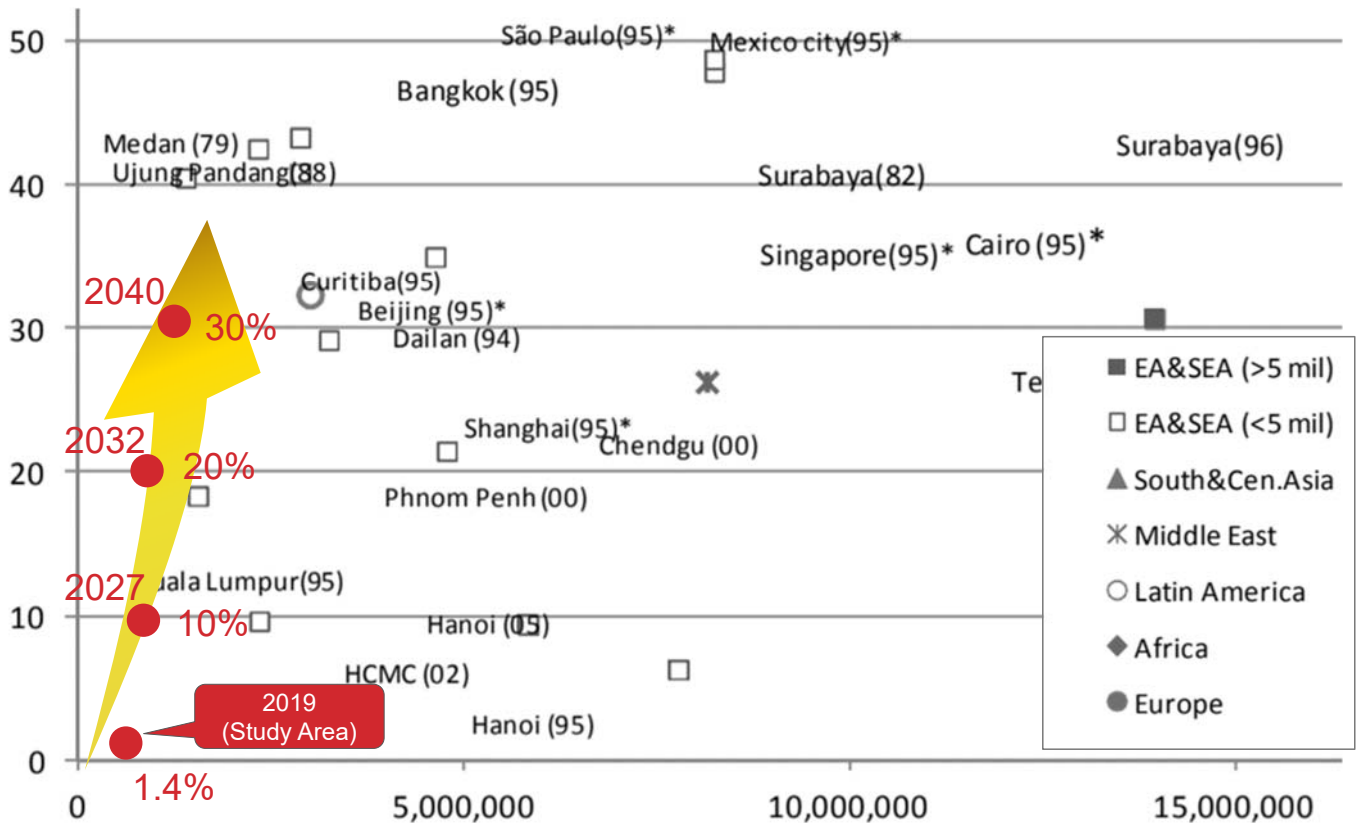
2. Approaches to Public Transport

Formulation of Hierarchical Public Transport Network



4. Action Plans for Scenario 2

2. Approaches to Public Transport



4. Action Plans for Scenario 2

2. Approaches to Public Transport

No	Indicators/Activities	Year 2019	Short-term Target (-2027)	Middle-term Target (-2032)	Long-term Target (-2040)
1	Public transport share	1.4%	10%	20%	30%
2	Population coverage of 500m catchment areas by PT	31%	40%	50%	60%

Example in the past

Ref 1: MPWT/ Vision 2030 and 10-Year development Strategy of PWT sector (2016-2025)

Target

- 20% of public transport share in Vientiane Capital in 2025

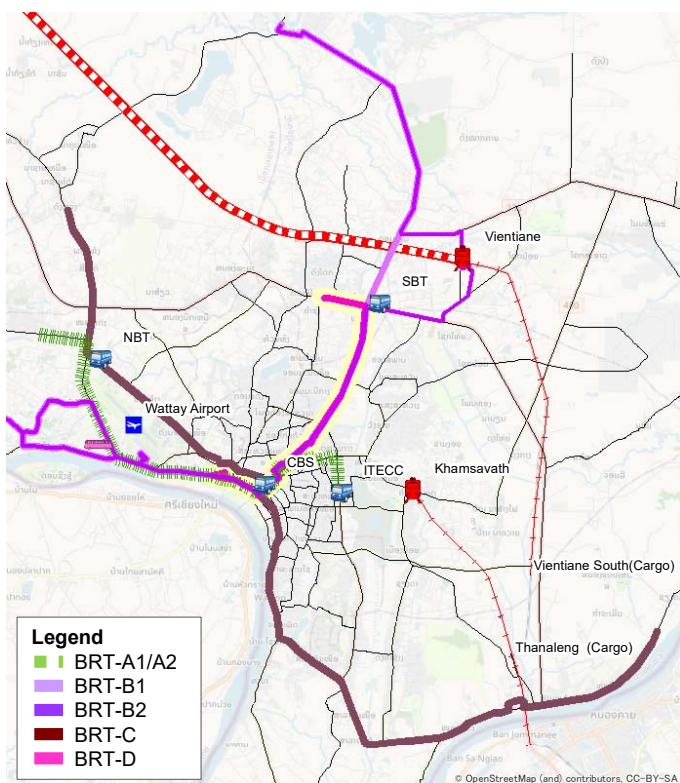
Ref 2: JICA, MPWT/ Comprehensive Urban Transport Master Plan in VC (VTMP 2008)

Target

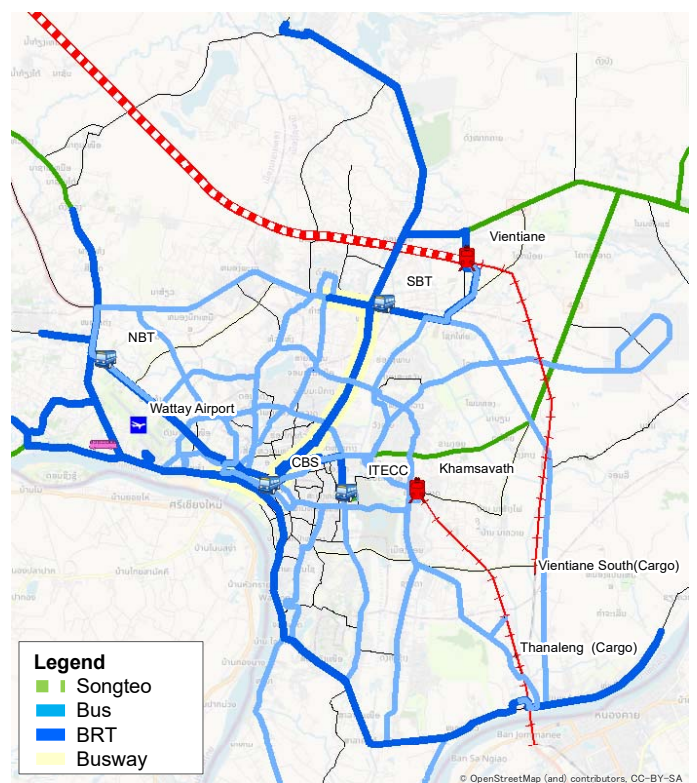
- 40% of public transport share in Vientiane Capital in 2025

Year 2027: PT Network in the Scenario 2

BRT Network

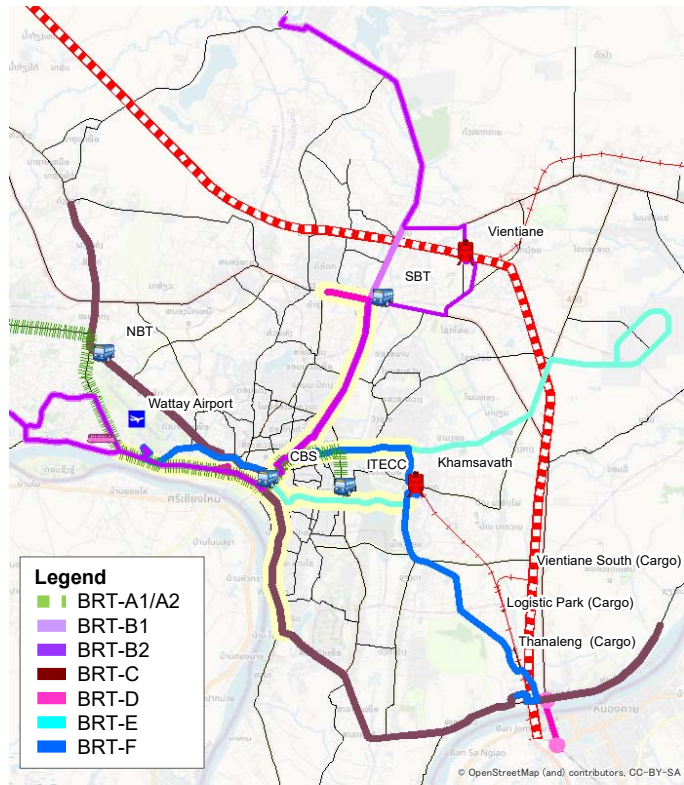


Full PT Network

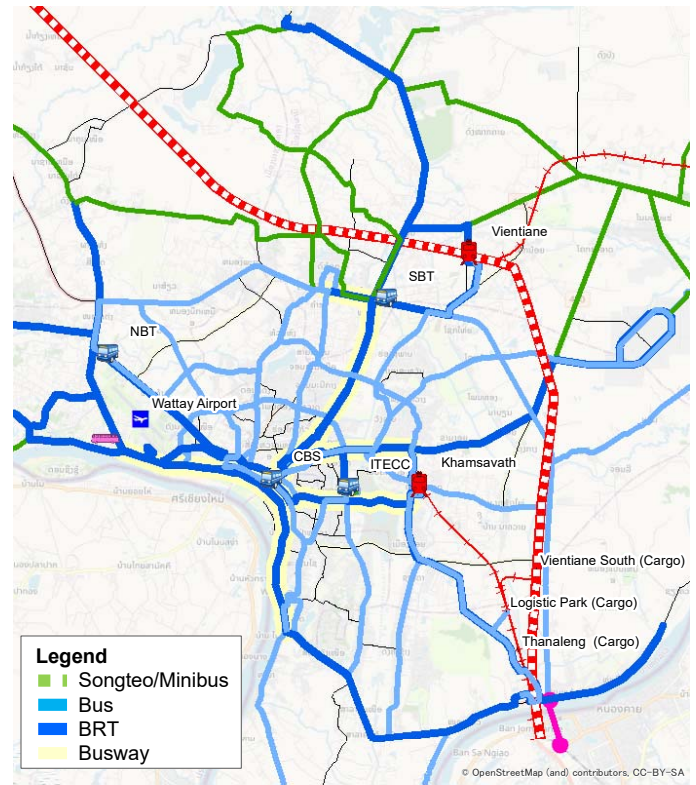


Year 2032: PT Network in the Scenario 2

BRT Network

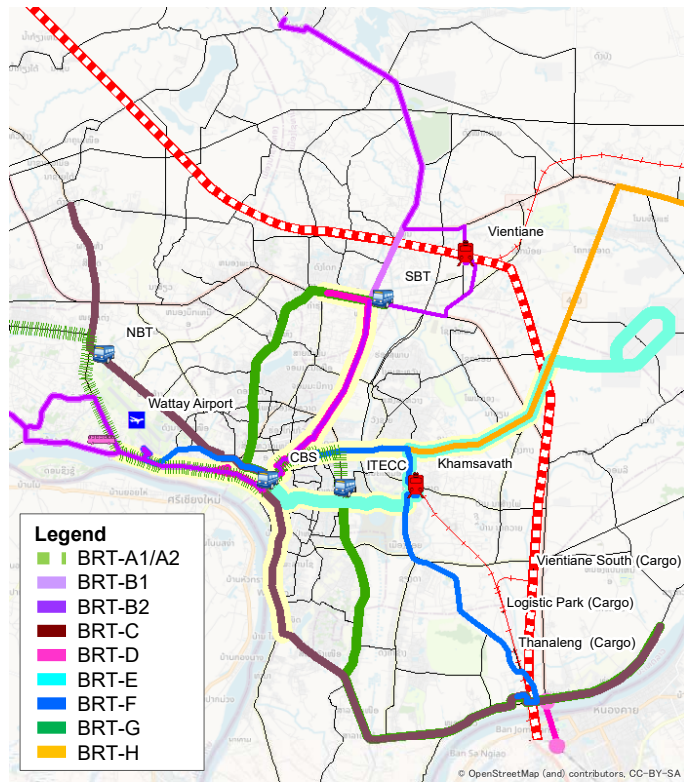


Full PT Network

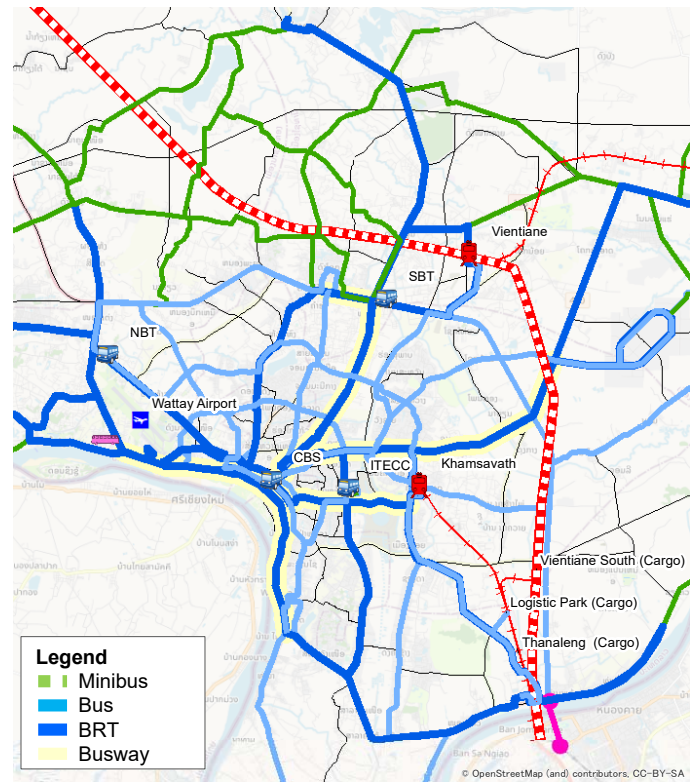


Year 2040: PT Network in the Scenario 2

BRT Network



Full PT Network



4. Action Plans for Scenario 2

2. Approaches to Public Transport

Public Transport Prioritization System

- Dedicated BRT lane
- Bus priority lane
- Bus priority signal / transit signal priority (TSP)
- Transit mall



Dedicated BRT Lanes in Jakarta
Source: Wikipedia



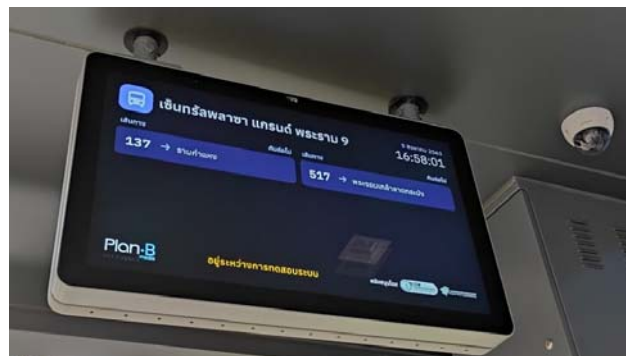
Bus Priority Lanes in Singapore
Source: Google street map

4. Action Plans for Scenario 2

2. Approaches to Public Transport

Smooth Transfer

- Completion of CBS (Central Bus Station) construction
- Smart information provision system
- P&R (park and ride) system including motorcycles and bicycles
- Smart fare system (MaaS: Mobility as a Service)



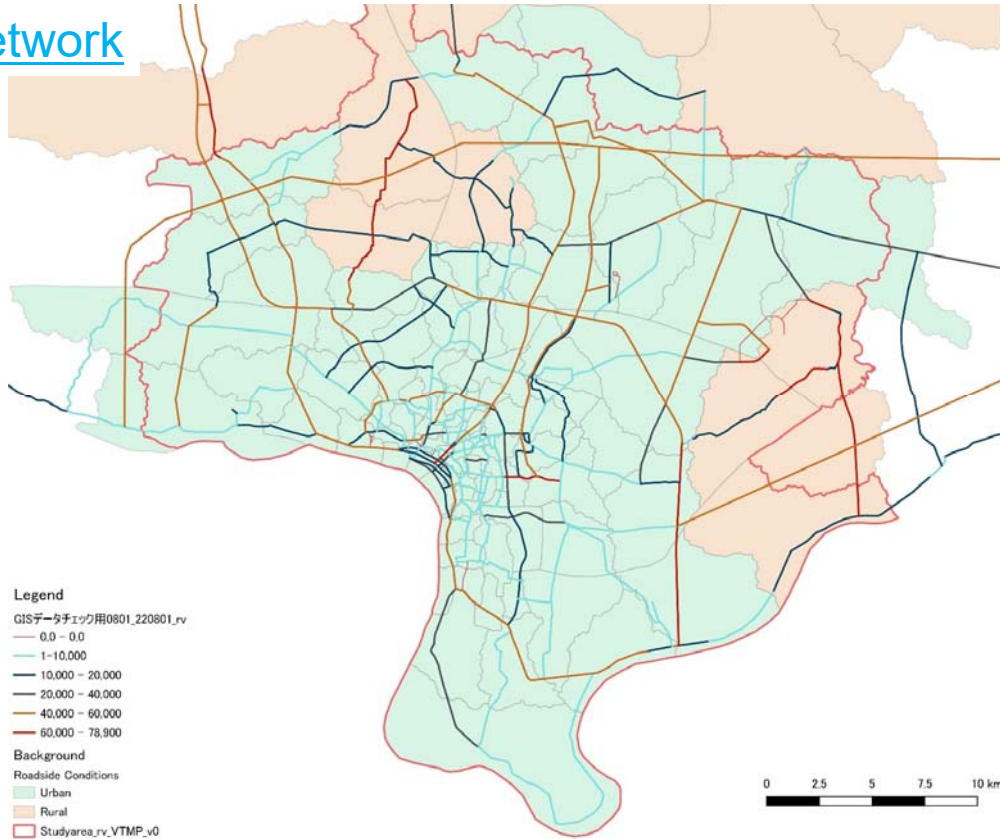
Smart Bus Shelter in Bangkok

Source: THAILAND HYPERLINKS website (<https://www.thaich.net/bangkoktsushin/bt20200806ui.htm>)

4. Action Plans for Scenario 2

3. Approaches to Road Network and Traffic Management

Road Network



4. Action Plans for Scenario 2

3. Approaches to Road Network and Traffic Management

Expanding Road Capacity

- Missing link connection
- Intersection improvement (signalized at-grade intersection and flyover)
- On-street parked car removal



Intersection Improvement in Japan
Source: Japan Society of Civil Engineering HP



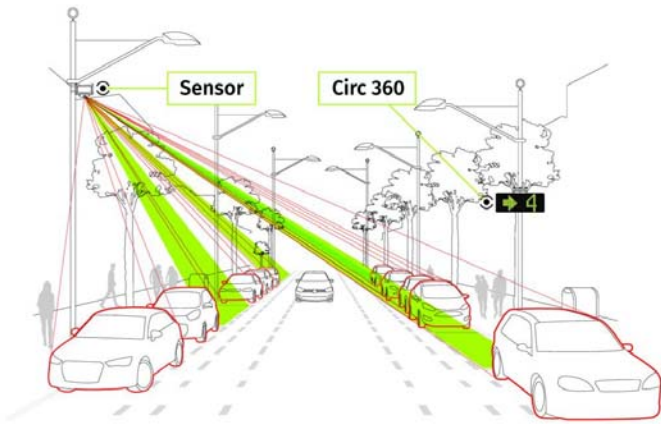
Flyover in Tokyo
Source: Tokyo Metropolitan Government HP

4. Action Plans for Scenario 2

3. Approaches to Road Network and Traffic Management

Reducing Traffic Demand (Privately Operated Vehicles)

- Tightening police enforcement against traffic violations. (illegal parking, drunk driving)
- Increased parking fee



Smart Parking Sensor

Source: Cleverciti website (<https://www.cleverciti.com>)



Drunk Driving Enforcement in Japan

Source: Tokyo Metropolitan Police Department HP

4. Action Plans for Scenario 2

4. Approaches to Pedestrian

Safe and Comfortable Walking Environment

- New sidewalks
- Existing sidewalk improvement (widening, eliminating steps, removing obstacles, preventing vehicles from climbing onto sidewalks, etc.)
- Sheds and tree plantings to block sun and rain



Wide Sidewalk with Sheds and Trees

Source: Wikimedia



Bollards to Prevent Vehicles from Entering the Sidewalk

Source: <https://www.cmpionline.com>

4. Action Plans for Scenario 2

4. Approaches to Pedestrian

Traffic Calming

- Pedestrian-only streets and transit malls
- Automobile speed control (cranks, humps, speed restrictions)
- Reduce automobile traffic
- Control of on-street parking



Transit Mall in Oakland
Source: American Planning Association HP



Car Free Day in Tokyo
Source: Wikipedia

4. Action Plans for Scenario 2

5. Approaches to NMT (Non-motorized Transport)

Improvement of Space for Bicycle Usage

- Bicycle Lane/Path
- Bicycle parking space in the city center and working place
- Bicycle & Ride parking space/system



Bicycle Lane in Siem Reap, Cambodia
Source: JICA Expert Team



Bike-n-Ride Shelter in USA
Source: <https://bouldercounty.gov>

4. Action Plans for Scenario 2

5. Approaches to NMT (Non-motorized Transport)

Bicycle Use Promotion

- Educational activities
- Preferential policies for bicycle commuting
- Bike share system + MaaS



Bike Education Program

Source: <https://roadsafewestgate.org.au>



Bike Share System

Source: <https://onbikeshare.com>

5. Action Plans for Scenario 2

6. Approaches to Elderly, physically challenged, and others with transportation difficulties

Mobility Environment Improvement

- Securing the necessary width of sidewalks
- Barrier-free access around major transport hub
- Blind guidance blocks for the visually impaired
- Non-step bus

Law / Regulation

- Barrier free related law
- Regulation for on-demand transport



Wide Sidewalk with Blind guidance blocks in Siem Reap, Cambodia

Source: JICA Expert Team

4. Action Plans for Scenario 2

7. Approaches to People's Behavior

Working Style

- Staggered work hours, flextime
- Work from home

Commuting Style

- P&R (park and ride)
- School bus promotion
- Carpool
- Reduction in commuting allowances for car use and increase in it for public transportation use

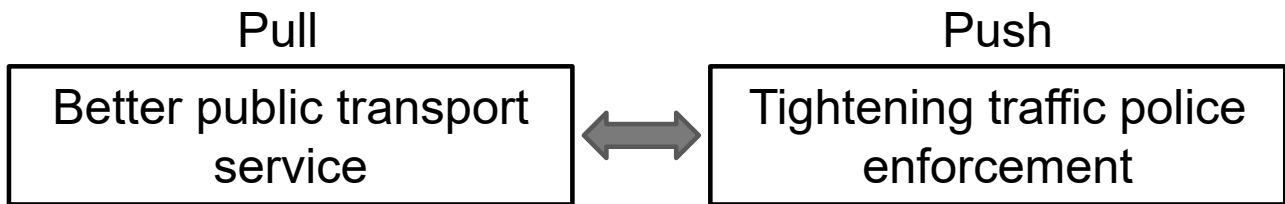
Education

- Introduction to school education (eco-friendly behavior, traffic rules, manners on public transportation, etc.)

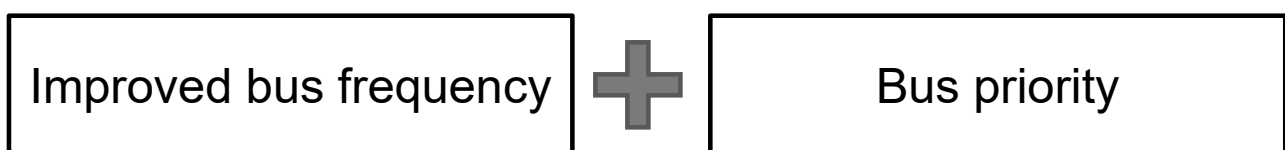
4. Action Plans for Scenario 2

8. Integration Strategy

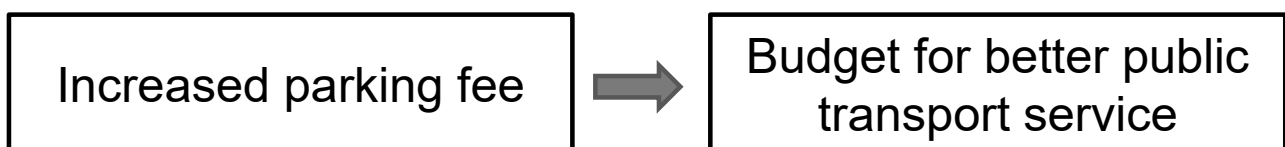
Push-Pull Combination

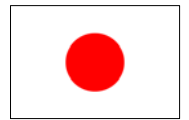


Complementary Combination



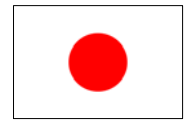
Financial Combination





Thank you





The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People's Democratic Republic

5th Joint Coordination Committee (JCC) Meeting

14th September 2022



JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



1. Project Design Matrix

Project Purpose

The capacities of relevant institutions in charge of formulating the urban transport MP of Vientiane are upgraded, and their administrative and managing capacities for implementing urban transport policies from the MP are strengthened.

1. C/Ps who attended serial training sessions on urban transport MP formulation improve their understandings on the issues, and achieve over **70%** on the post-training test scores

→**Achieved**

2. C/Ps who attended training (s) on the project implementation manual improve their understandings, and achieve over **70%** on the post-training test scores

→**Planned in 2022**

3. MPWT, DOT or any other relevant institution officially approves the urban transport MP and action plan ("any other relevant institution" which is responsible for approving the MP and action plan" to be identified, if any).

→**Planned in 2023**

1. Project Design Matrix

Output 1

The mechanism for discussing and sharing the views on the issues of urban transport is established.

1. More than 3 issues identified during the initial stage of in the Project are discussed in the meetings of the CTMC

→**Planned in 2022**

2. More than 3 issues identified during the initial stage of in the Project and discussed in the meetings of the CTMC are dealt by related institutions with follow-up activities

→**Planned in 2022**

1. Project Design Matrix

Output 2

Urban transport MP is formulated and trainings (including OJT) are offered to C/Ps for their capacity building.

1. More than 18 C/Ps receive training on formulating the urban transport MP

More than 70% of the C/Ps receive training on formulating the urban transport master plan

→**Achieved**

2. An urban transport MP for Vientiane Capital is formulated by updating the year 2008 version.

→**On-going**

1. Project Design Matrix

Output 3

Pilot project(s) are implemented and the targeted issues are mitigated.

1. More than **3** C/Ps play specific roles in the planning and implementation of the pilot projects
→**Achieved**

2. More than 18 C/Ps receive training on the project implementation manual
More than 70% of the C/Ps receive training on the project implementation manual
→**Planned in 2022**

3. Urban traffic-related indicators improve on average travel speed +5 km/h in pilot project areas.
→**Some parts of the pilot project area has achieved**

1. Project Design Matrix

Overall Goal

Institutional measures and priority projects proposed in the urban transport master plan are implemented in Vientiane Capital under the leadership of GOL.

1. More than **3 projects** and/or policies proposed in the master plan are reflected in the annual plans of MPWT, DOT, or other related agencies with budget allocations.

2. More than **2 projects** and/or policies proposed in the master plan are discussed and considered with donors for implementation.

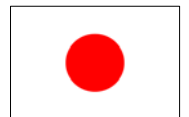
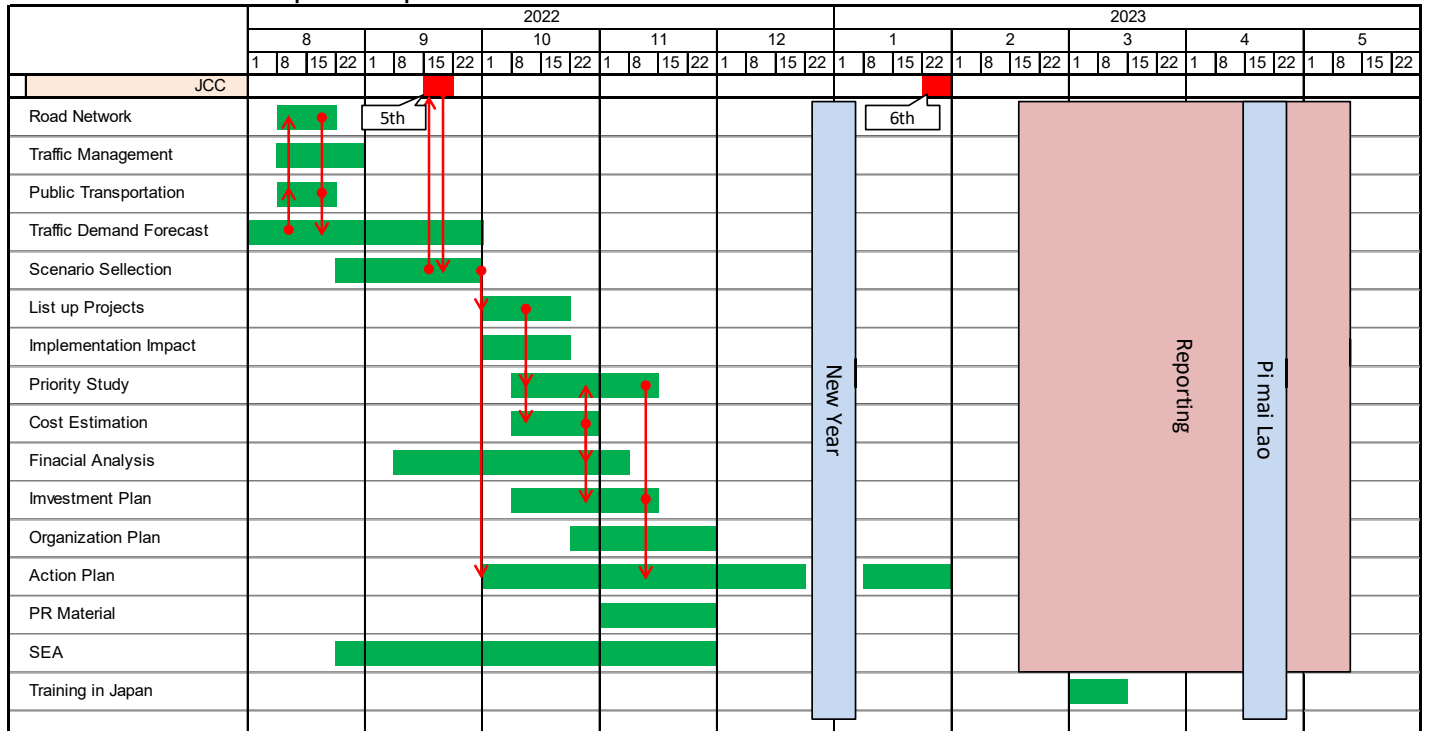
3. More than **5 projects** and/or policies proposed in the master plan are implemented (under implementation or completed).

4. Urban traffic related indicators in Vientiane Capital improve by **X%** or more.
→The number of the bus passengers is the candidate indicator for X%.

5. The roles of “Steering Committee to Solve Congestion and Traffic-Management in Traffic Routes in the City of Vientiane Capital” (CTMC) are established and more than **2 issues** regarding the implementation of the master plan are discussed annually in the CTMC meetings.

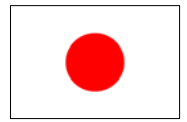
2. Schedule

Schedule for Vientiane Transport Masterplan



Thank you





The Project for Institutional Capacity Building for Sustainable Urban Transport System in Lao People’s Democratic Republic

6th Joint Coordination Committee (JCC) Meeting

21st February 2023

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
ORIENTAL CONSULTANTS GLOBAL



Master Plan Structure

Master Plan



CONTENTS

- **Action Plan**
 - 1. Public Transport**
 - 2. Road Network and Traffic Management**
 - 3. Behavior Change**



Public Transport

Public Transport

Strategies

1. Incremental public transport improvement to enhance the level of services
2. Hierarchical public transport network based on BRT system and service integration
3. Proactive cooperation with paratransit and expanded public transport service provision
4. Sustainable governance system of public transport operation and organizational coordination
5. Inclusive transit-oriented development (TOD) with effective land use planning

Action Plan

1. Incremental public transport improvement to enhance the level of services

<BRT>

- Installment of busway
- Traffic signaling system (PTPS) along busway
- Procurement of new vehicles and spare parts
- Public transport facility development and information provision
- Development of depot and maintenance facilities and control center
- Automatic fare collection system

<Bus>

- Procurement of new vehicles and spare parts (bus/minibus/school bus)
- Public transport facility development and information provision
- Development of depot and maintenance facilities and control center
- Bus Driver Training
- Public transport facility development and information provision
- Renovation of existing bus terminals (CBS)
- Automatic fare collection system
- Bus location system for public buses

Public Transport

Strategies

1. Incremental public transport improvement to enhance the level of services
2. Hierarchical public transport network based on BRT system and service integration
3. Proactive cooperation with paratransit and expanded public transport service provision
4. Sustainable governance system of public transport operation and organizational coordination
5. Inclusive transit-oriented development (TOD) with effective land use planning

Action Plan

2. Hierarchical public transport network based on BRT system and service integration

- Rearrangement of bus lines considering BRT operation

3. Proactive cooperation with paratransit and expanded public transport service provision

- Songteo operational cooperation program (Step 1)
- Songteo service integration program (Step 2)
- Songteo fleet renewal program (Step 3)
- Procurement of new NMT vehicles (E-Pedi cab)

4. Sustainable governance system of public transport operation and organizational coordination

- Capacity development program of Management Entity (UTMS)
- "Integration program of public transport services (MaaS)organizational coordination"

5. Inclusive transit-oriented development (TOD) with effective land use planning

- Transit-oriented development (TOD) harmonized with BRT investment
- Reform of urban planning and land use laws to enable TOD

Ref: International / Intercity Public Transport Projects

- [Lao-China High Speed Railway \(Extension\) : Vientiane station - Thailand](#)
- [Lao-China Railway \(Extension\) : Vientiane South station - Logistic Park station](#)
- [Lao-Thai Railway Phase 2 :Thanaleng – Khamsavath station](#)
- [Vientiane-Vung Ang \(Vietnam\) Railway](#)
- [Cable Car :Thanaleng – Thailand](#)

Public Transport

1. Approaches to Incremental public transport improvement to enhance the level of services

BRT

1. Installment of busway
2. Traffic signaling system (PTPS) along busway
3. Procurement of new vehicles and spare parts
4. Public transport facility development and information provision
5. Development of depot and maintenance facilities and control center
6. Automatic fare collection system

Bus priority system
(Nagoya, Japan)



Source: JICA Study Team

Bus shelter
(Hanoi, Vietnam)



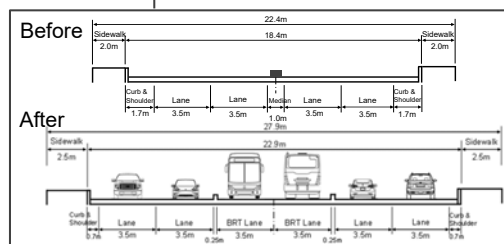
Source: JICA Study Team

Public Transport

Implementation Schedule

Proposed Project	Status	Responsible Authority	Short-term 2022~2027	Middle-term 2028~2032	Long-term 2033~2040	Unit
Strategy 1: Incremental public transport improvement to enhance the level of services						
BRT related Projects						
PS1-01 Installment of Busway	-	-				
1) -Busway-01, 11.5km	Ongoing	ADB				
2) -Busway-02, 4.0 km	Middle					
3) -Busway-03, 6.2 km	Middle					
4) -Busway-04, 6.1 km	Long					
PS1-02 Traffic signaling System (PTPS)	-	-				
1) -Busway-01, 11.5km	Ongoing	ADB				
2) -Busway-02, and 03	Middle	UTMS				
3) -Busway-04	Long	UTMS				
PS1-03 Procurement of new BRT vehicles and spare parts	-	-				
1) -Line A1, B1, B2 and D by ADB	Ongoing	ADB				55
2) -Line C and additional vehicles for A1, B1, B2 and D	Short	UTMS				77
3) -Line A2, E, and additional vehicles to increase frequencies	Middle	UTMS				49
4) -Line A3, F, and additional vehicles to increase frequencies	Long	UTMS				196
PS1-04 Transit facility development for BRT and information provision	-	-				
1) -Short Median Stations	Short	ADB				23
2) -Short Curbside Stations	Short	ADB				5
3) -Short Median Stations	Short	UTMS				2
4) -Short Curbside Stations	Short	UTMS				199
5) -Middle Median Stations	Middle	UTMS				28
6) -Middle Curbside Stations	Middle	UTMS				62
7) -Long Median Stations	Long	UTMS				12
8) -Long Curbside Stations	Long	UTMS				0
PS1-05 Development of BRT depot & maintenance facilities and the Control Center	-	-				
1) -Short (ADB)	Ongoing	ADB				1
2) -Short	Short	VC SBE				1
3) -Middle	Middle	VC SBE				1
4) -Long	Long	VC SBE				1
PS1-06 Intelligent Transport System and Station Services	Ongoing	ADB				
PS1-07 Automatic Fare Collection System	-	-				
1) -Short (ADB)	Ongoing	ADB				55
2) -Short	Short	VC SBE				77
3) -Middle	Middle	VC SBE				49
4) -Long	Long	VC SBE				196

Installment of Busway and PTPS



Public Transport

1. Approaches to Incremental public transport improvement to enhance the level of services

Bus/ minibus/ school bus

1. Procurement of new vehicles and spare parts (bus/minibus/school bus)
2. Public transport facility development and information provision
3. Development of depot and maintenance facilities and control center
4. Bus Driver Training
5. Public transport facility development and information provision
6. Renovation of existing bus terminals (CBS)
7. Automatic fare collection system
8. Bus location system for public buses
9. Rearrangement of bus lines considering BRT operation

Public Transport

Implementation Schedule

Proposed Project	Status	Implementing Authority	Short-term 2022~2027	Middle-term 2028~2032	Long-term 2033~2040	Unit
Strategy 1: Incremental public transport improvement to enhance the level of services						
Bus related Projects						
PS1-08 Procurement of new Bus vehicles and spare parts						
1) -Short: Buses	Short	VCSBE	▶			122
2) -Middle: Buses	Middle	VCSBE		▶		41
3) -Long: Buses	Long	VCSBE			▶	122
PS1-09 Procurement of new Minibus vehicles and spare parts						
1) -Short: Minibuses (JP Embassy)	Ongoing	JP Embassy	▶			52
2) -Middle: Minibuses	Middle	VCSBE		▶		167
3) -Long: Minibuses	Long	VCSBE			▶	158
PS1-10 Procurement of new School Bus vehicles and spare parts						
1) -Short: School Buses	Short	MPWT-DOT	▶			50
2) -Middle: School Buses	Middle	MPWT-DOT		▶		100
3) -Long: School Buses	Long	MPWT-DOT			▶	200
PS1-11 Bus Driver Training						
-Driving Simulator + Training	Ongoing	JP Embassy	▶			
PS1-12 Transit facility development for Bus and information provision						
1) -Short	Short	VCSBE	▶			390
2) -Middle	Middle	VCSBE		▶		75
3) -Long	Long	VCSBE			▶	106
PS1-13 Renovation of existing bus terminals (CBS)	Ongoing	Vientiane Capital				
PS1-14 Bus location system for public buses						
1) -Short	Short	VCSBE	▶			174
2) -Middle	Middle	VCSBE		▶		208
3) -Long	Long	VCSBE			▶	280
PS1-15 Automatic Fare Collection System						
1) -Short	Short	VCSBE	▶			174
2) -Middle	Middle	VCSBE		▶		208
3) -Long	Long	VCSBE			▶	280

Public Transport

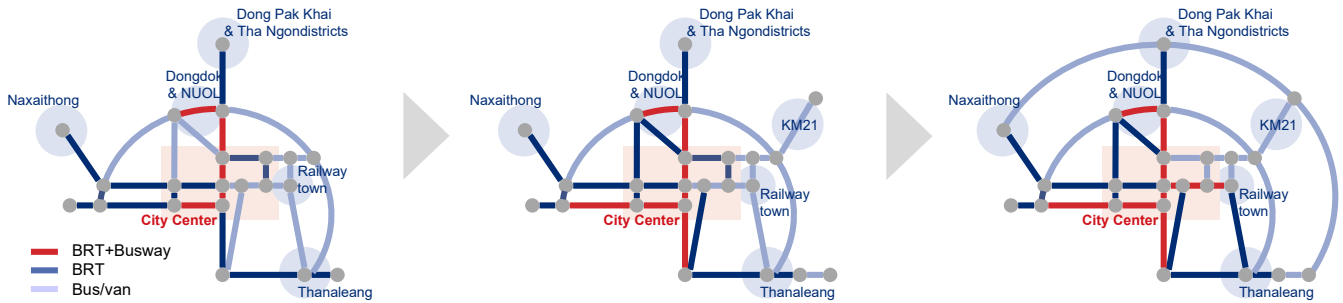
2. Hierarchical public transport network based on BRT system and service integration

1. Rearrangement of bus lines considering BRT operation

Short-term

Medium-term

Long-term

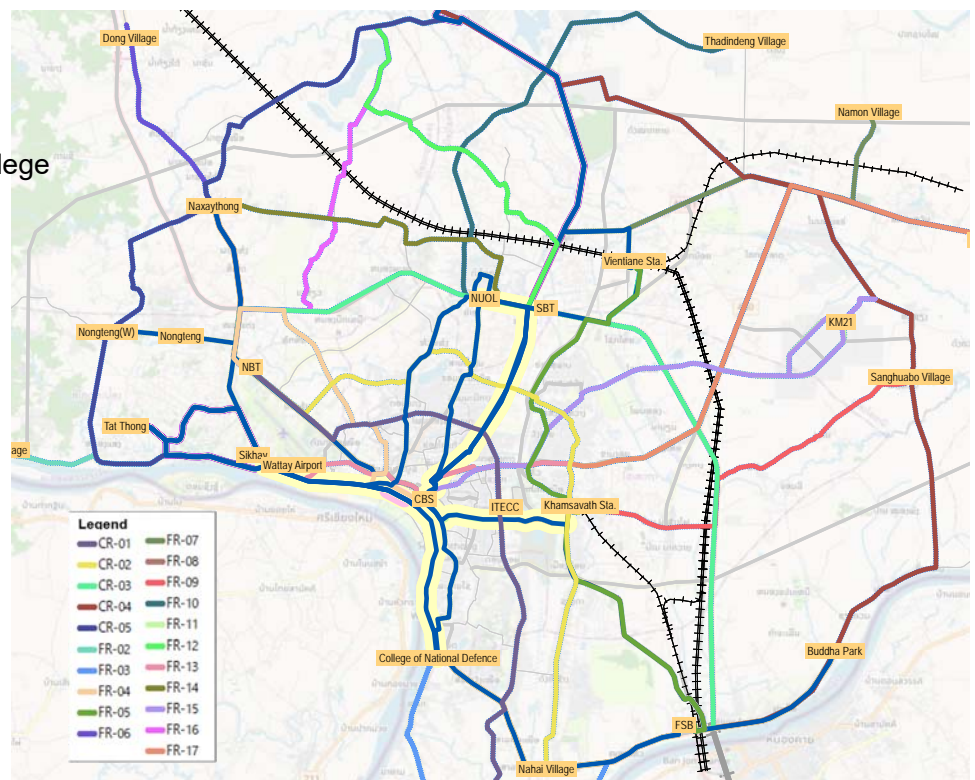


Proposed Project	Status	Implementing Authority	Short-term 2022~2027	Middle-term 2028~2032	Long-term 2033~2040	Unit
Strategy 3: Hierarchical public transport network based on BRT system and service integration						
PS3-01 Rearrangement of bus lines for BRT	-					
1) -Short	Short	VCSBE	▶			5
2) -Middle	Middle	VCSBE		▶		5
3) -Long	Long	VCSBE			▶	8

Public Transport

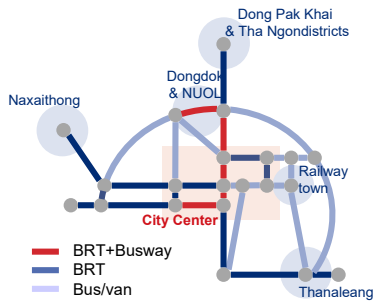
2. Hierarchical public transport network based on BRT system and service integration

- CR-01: NBT/Savang Village
- CR-02: NBT/Nahai Village
- CR-03: NBT/Thanaleang
- FR-02: Mai Village/Sikhay
- FR-03: FSB/National Defense College
- FR-04: CBS/NBT
- FR-05: FSB/Vientiane Sta.
- FR-06: NBT/Dong Village
- FR-07: SBT/Namon Village
- FR-08: ITECC/Naphasouk Village
- FR-09: ITECC/Sanghuabo Village
- FR-10: SBT/Thadindeng Village
- FR-11: CBS/KM21
- FR-12: SBT/Than Ngon
- FR-13: Airport/FSB
- FR-14: SBT/Naxaythong
- FR-15: CBS/KM21
- CR-04: FSB/Than Ngon
- CR-05: Sikhay/Than Ngon
- FR-16: NBT/Than Ngon
- FR-17: CBS/Naphasouk Village

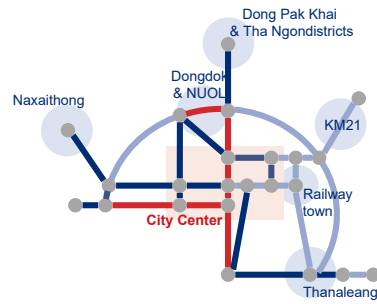


Phased Development

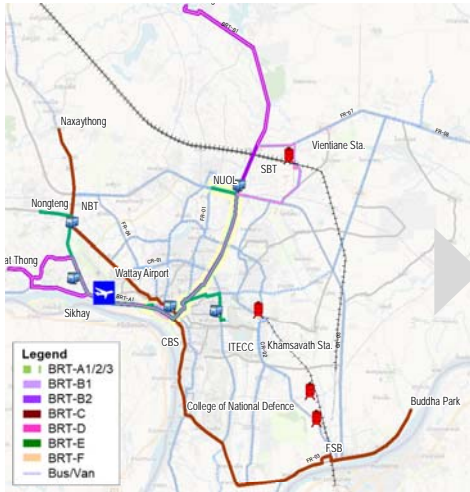
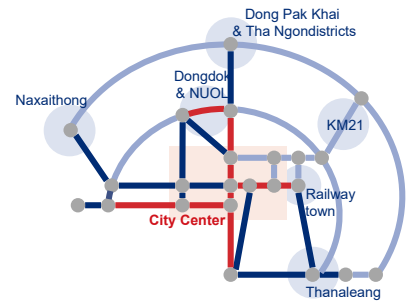
Short-term



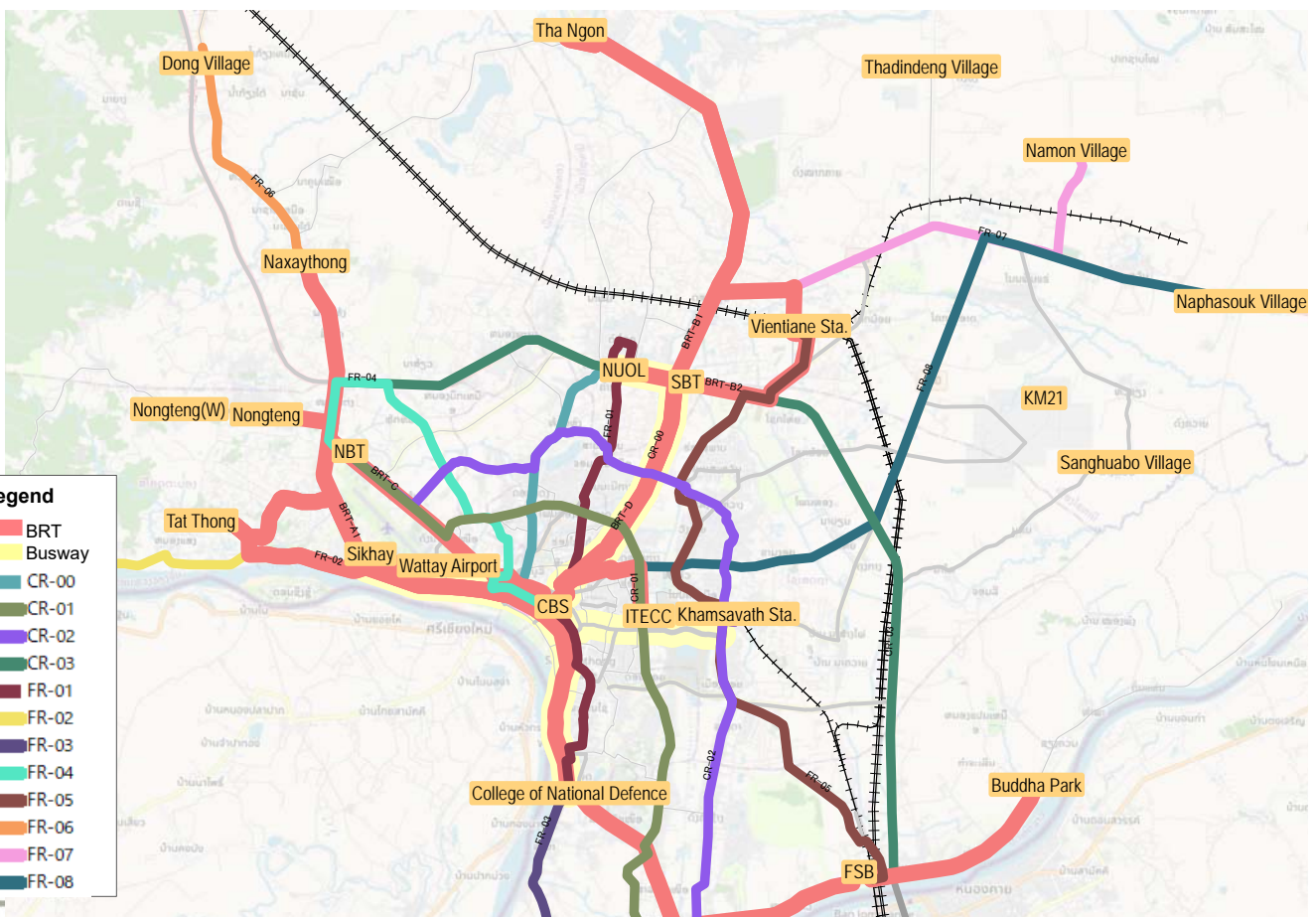
Medium-term



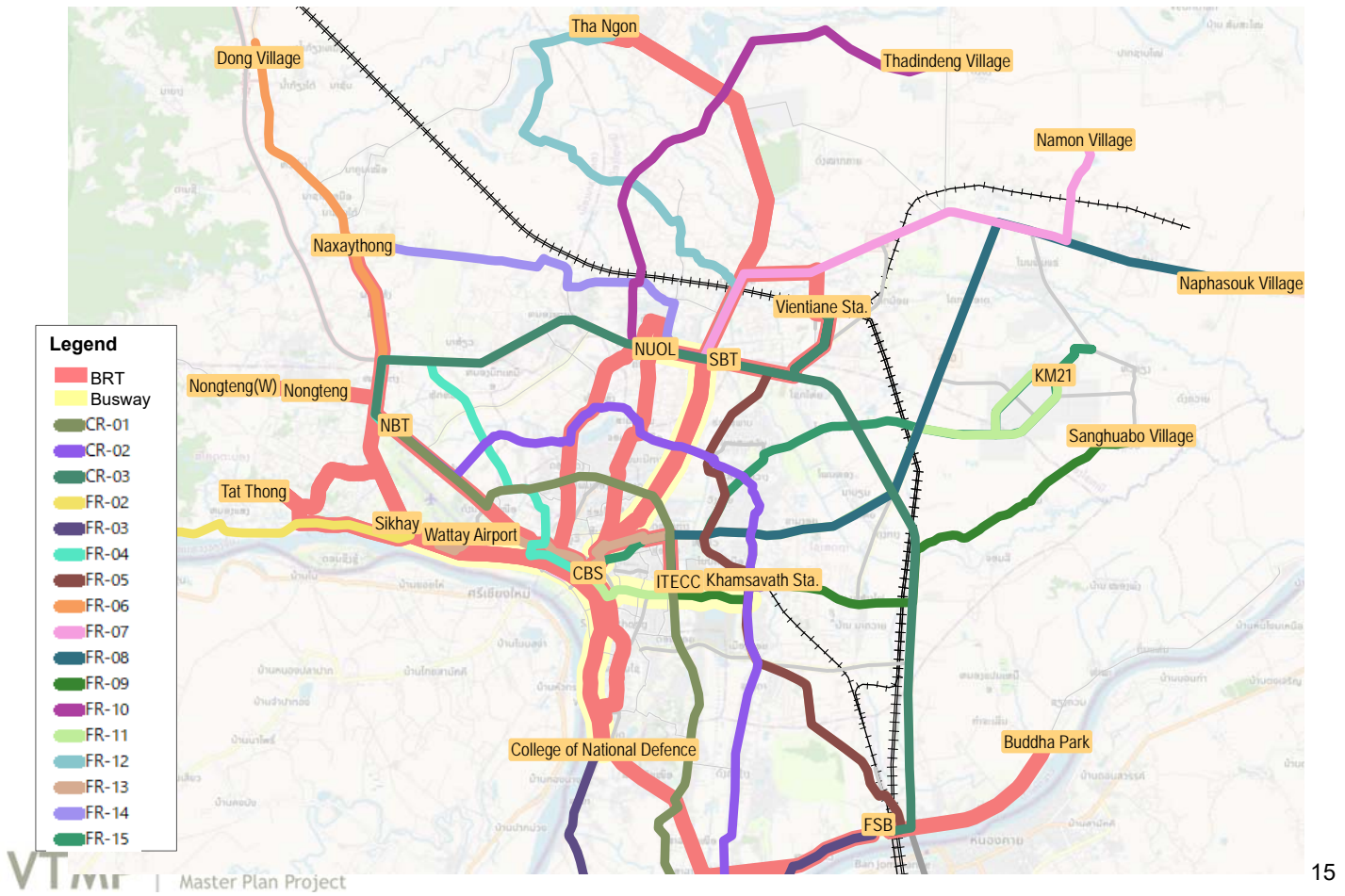
Long-term



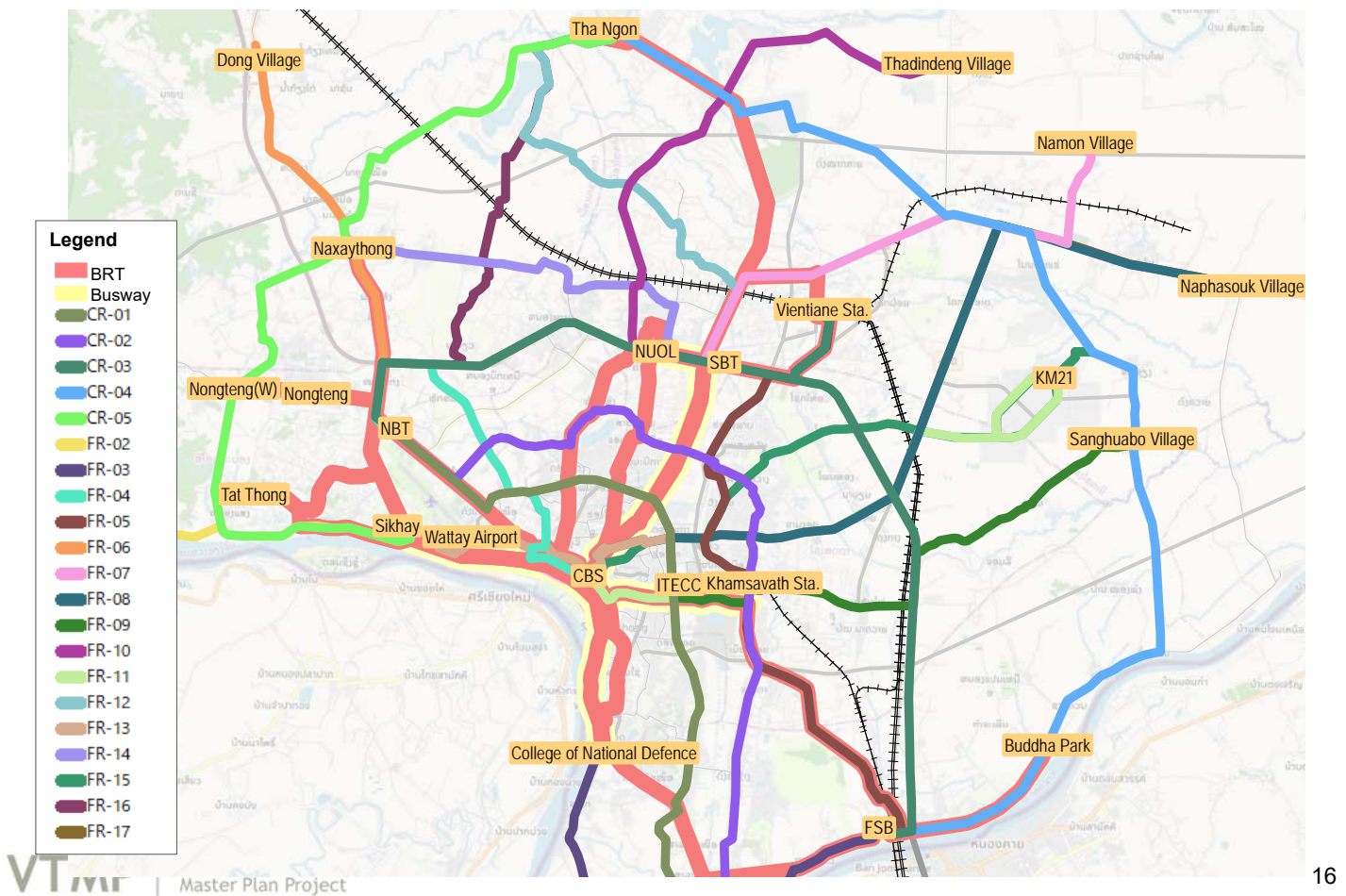
Year 2027: PT Network in the Scenario 2



Year 2032: PT Network in the Scenario 2



Year 2040: PT Network in the Scenario 2

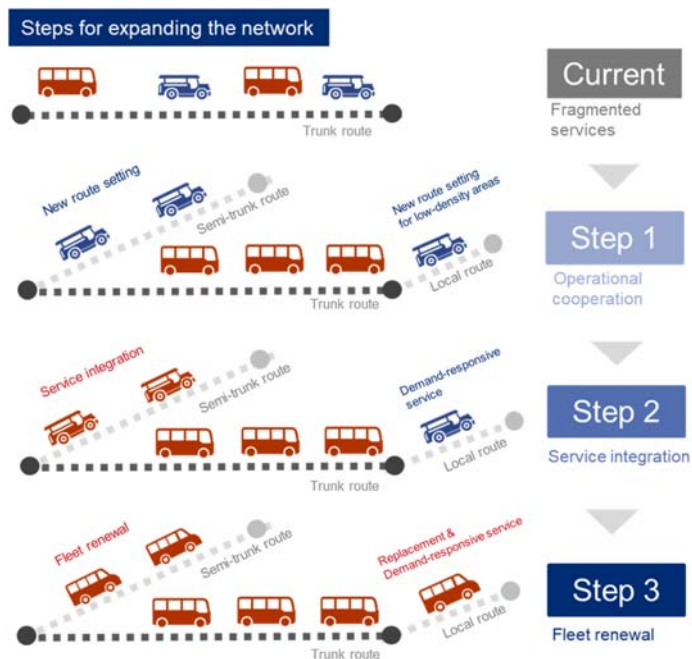


Public Transport

3. Approaches to Proactive cooperation with paratransit and expanded public transport service provision

Action Plan

1. Songteo operational cooperation program (Step 1)
2. Songteo service integration program (Step 2)
3. Songteo fleet renewal program (Step 3)
4. Procurement of new NMT vehicles (E-Pedi cab)
5. Regulation revision for new public transport operation (DRT, BRT, and e-pedicab, etc)



Public Transport

4. Approaches to Sustainable governance system of public transport operation and organizational coordination

Action Plan

1. Capacity development program of Management Entity (UTMS)
2. "Integration program of public transport services (MaaS) organizational coordination"



Future integration of urban lives in Vientiane



Source: Sochor et al., 2017

5. Approaches to Inclusive transit-oriented development (TOD) with effective land use planning

Action Plan

1. Transit-oriented development (TOD) harmonized with BRT investment
 - 1) Nongping New Urban Development Project
 - 2) Nongtha New Urban Allocation Development Project
 - 3) Development Project along North area of 450-year road
 - 4) Development Project at central area of 450-year road
 - 5) Development Project at south area of 450-year road
 - 6) Thaluang Lake S.E.Z Development Project
 - 7) Dongphosy New Urban Development Project
 - 8) Vientiane Industrial Zone Development Project
 - 9) Xaysettha Comprehensive Development Project
 - 10) Vita Industrial Zone Development Project
2. Reform of urban planning and land use laws to enable TOD

Road Network and Traffic Management

Action plan

Strategies

1. Hierarchical road networks and service integration with public transport

- Clarify the role of roads
- Create a strong and smooth road network

2. Existing transport service improvement through proper maintenance and management

- Improve existing road services and road safety

3. Congestion mitigation by appropriate traffic management

- Congestion reduction by proper traffic management and road improvement

4. Safe, secure, and comfortable traffic environment for everyone

- Comfortable and safe walking space on the road
- Safe and comfortable traffic for everyone

Action plan

1. Road Network

- Missing link connection
- Road widening
- Road alignment improvement
- **Signal system improvement on the intersections**

2. Road Maintenance & Management

- Proper maintenance and management for pavement, road marking and drainage equipment

3. Traffic Control and Demand Management

- Capacity development for traffic police & UTMS
- Increase parking fee & fine
- Improvement of equipment for traffic enforcement
- Legislation for demand responsive transport

Road Network and Traffic Management

Action plan

Strategies

1. Hierarchical road networks and service integration with public transport

- Clarify the role of roads
- Create a strong and smooth road network

2. Existing transport service improvement through proper maintenance and management

- Improve existing road services and road safety

3. Congestion mitigation by appropriate traffic management

- Congestion reduction by proper traffic management and road improvement

4. Safe, secure, and comfortable traffic environment for everyone

- Comfortable and safe walking space on the road
- Safe and comfortable traffic for everyone

Action plan

4. Pedestrian (facilities & environment)

- Sidewalk development and improvement
- Automobile speed control (humps, speed restriction)

5. NMT “Non-motorized” Transport (facilities & promotion)

- Bicycle lanes/paths development
- Educational activities
- Preferential policies for bicycle commuting
- Bicycle share system

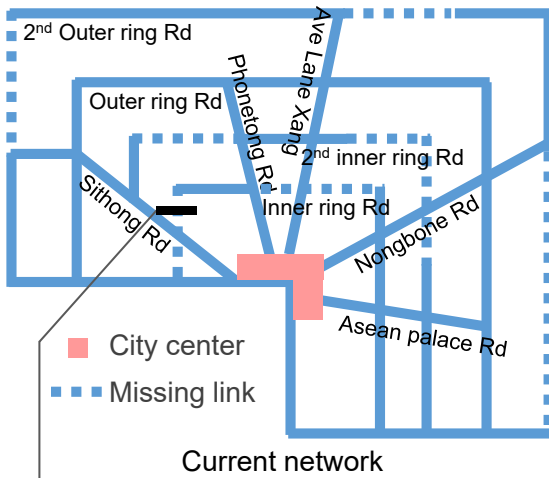
6. People with difficulties for using transport

- Barrier free access around major transport hubs
- Legislation for Barrier free access

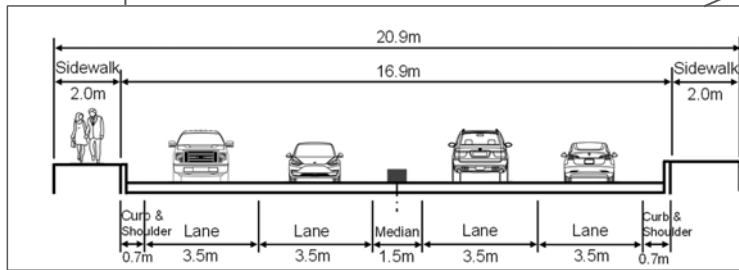
Road Network and Traffic Management

1.1 Stable and Smooth Road Network

- Missing link connection

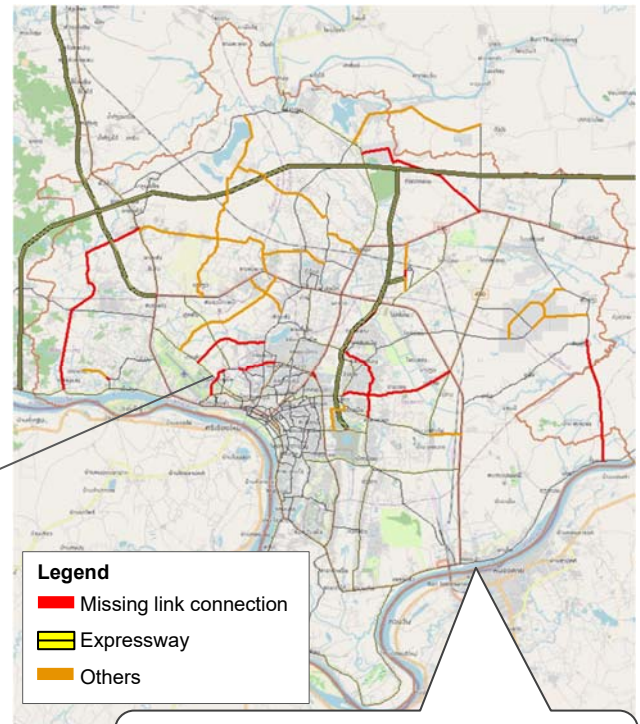


Current network



Cross section (inner ring road)

Detailed road network in scenario 2 long



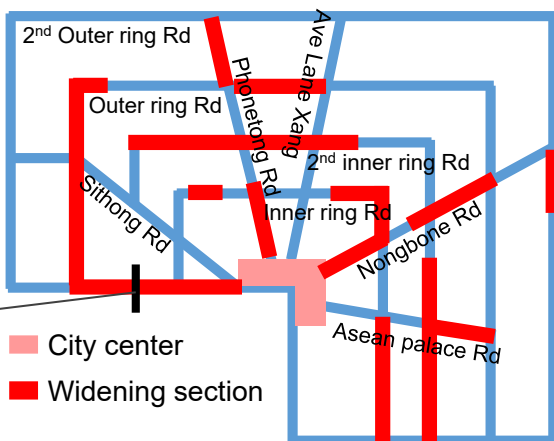
Legend

- Target sections are
- Originally planned to be constructed
 - Public transport is planned to be developed

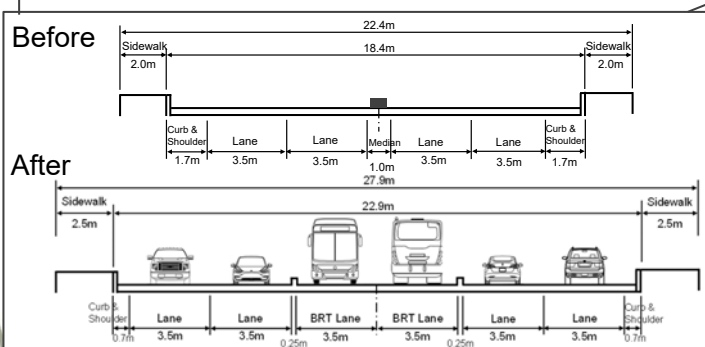
Road Network and Traffic management

1.1 Strong and smooth road network

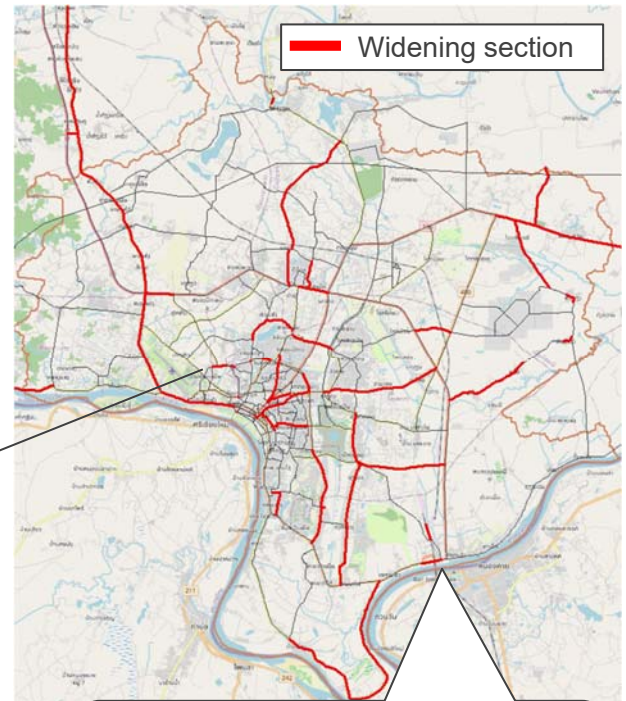
- Road widening



Widening sections of main roads



Detailed road network in scenario 2 long

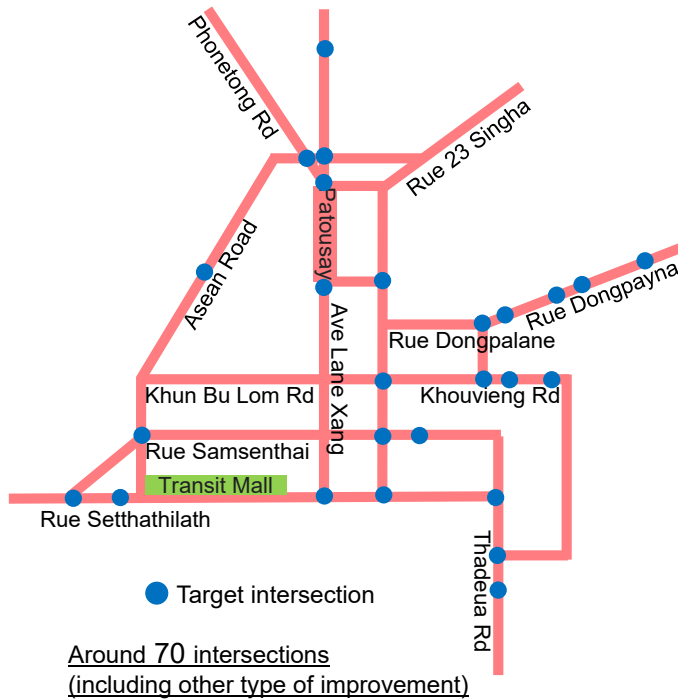


- Widening sections
- Originally planned to be constructed
 - Public transport is planned to be developed

Road Network and Traffic management

1.2 Intersection Improvement

- Signalization of intersections

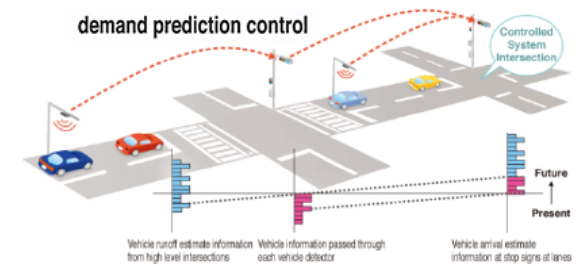


1. Introduce signalized intersection



Signalized intersection in Japan
Source: Japan Society of Civil Engineering HP

2. Introduce Synchronized signal control system

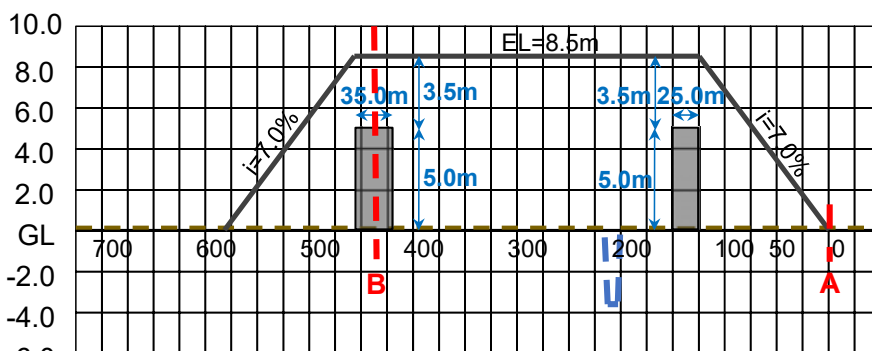
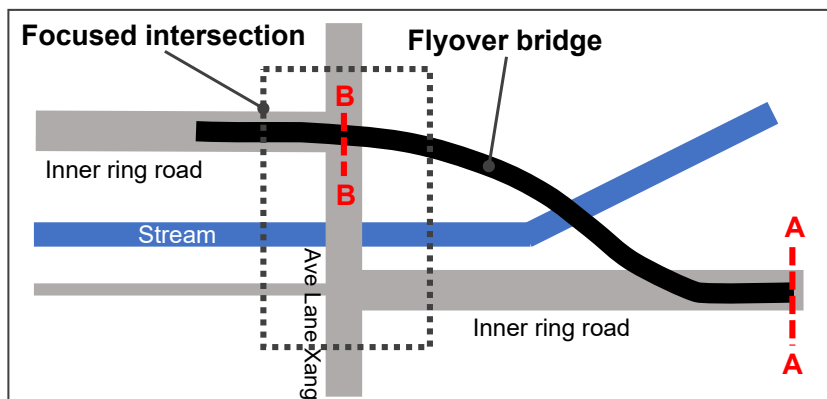


Sophisticated signalized intersection
Source: https://www.seiss.co.jp/en/products/its/traffic_control/ 25

Road Network and Traffic management

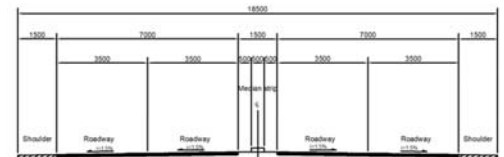
1.2 Intersection improvement

- Flyover construction

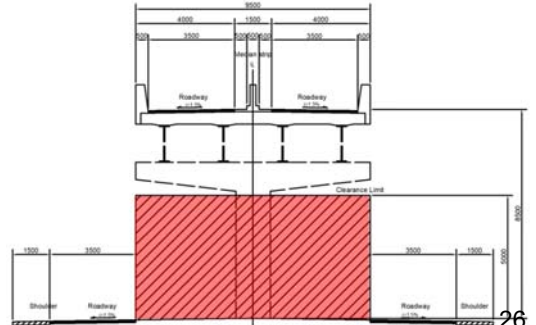


Flyover in Tokyo
Source: Tokyo Metropolitan Government HP

Cross section A-A



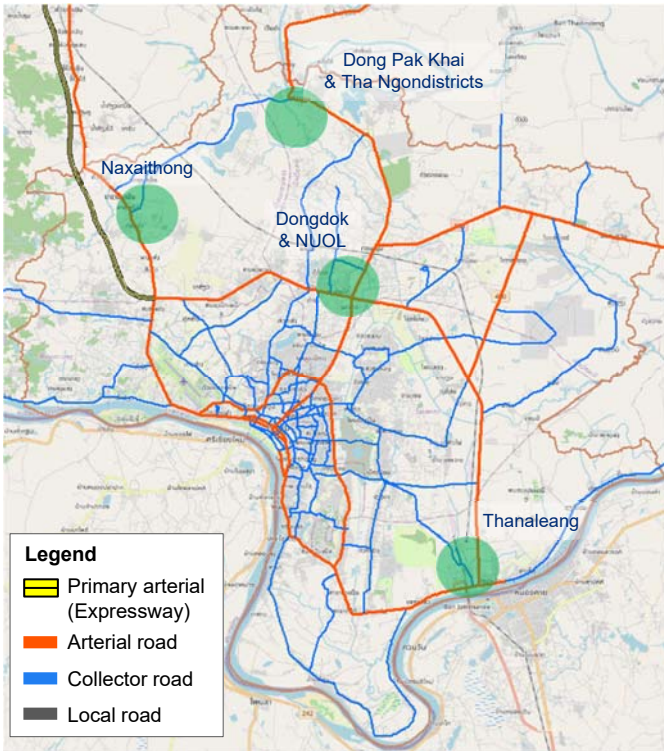
Cross section B-B



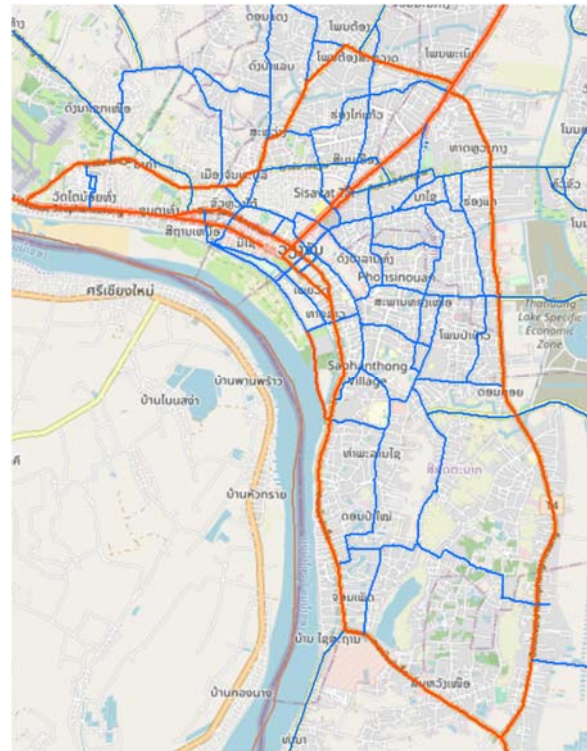
Road Network and Traffic management

Current Road network

Road Network



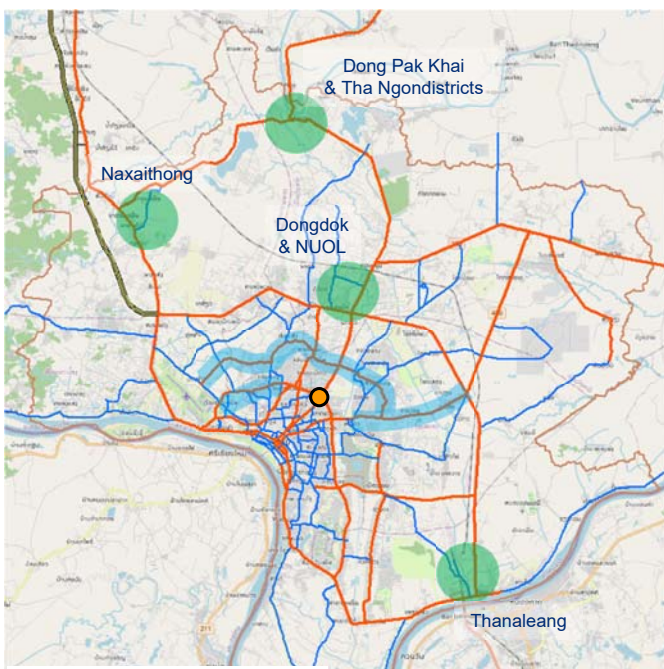
Road Network in city center



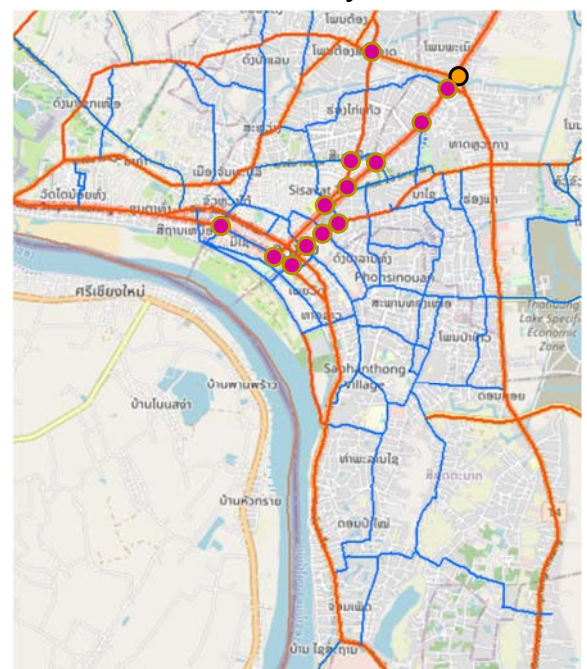
Road Network and Traffic management

Future Road Network in 2027 (Scenario 2 short)

Road Network



Road Network in city center



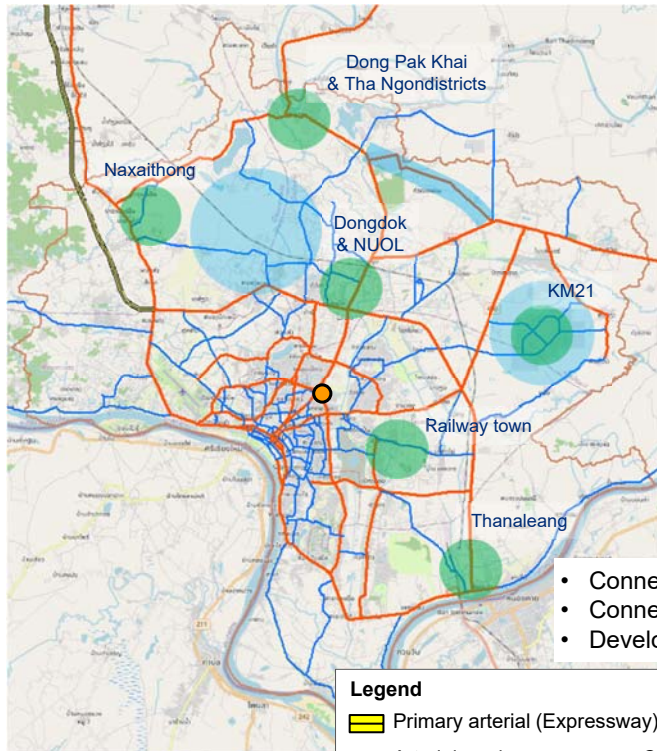
- Connect missing link
- Hierarchize roads

Legend	
Primary arterial (Expressway)	Collector road
Arterial road	Local road
Signal improvement (in a road network in city center)	Flyover

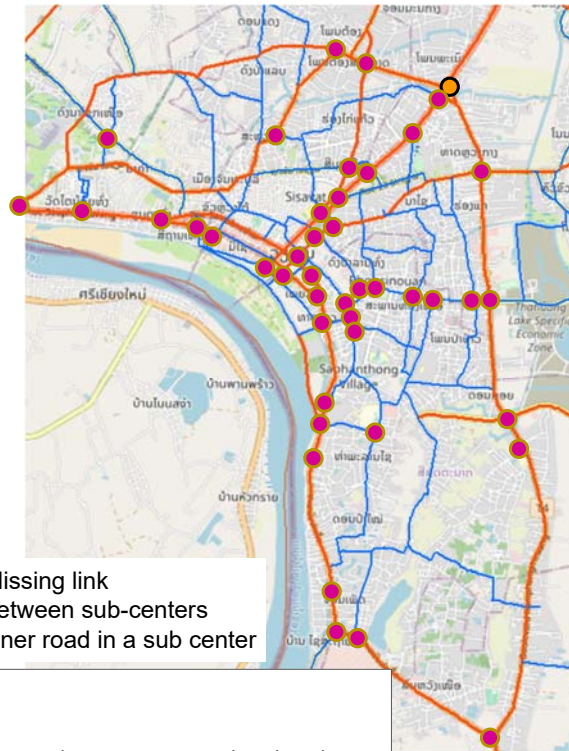
Road Network and Traffic management

Future Road Network in 2032 (Scenario 2 middle)

Road Network



Road Network in city center



- Connect Missing link
- Connect between sub-centers
- Develop inner road in a sub center

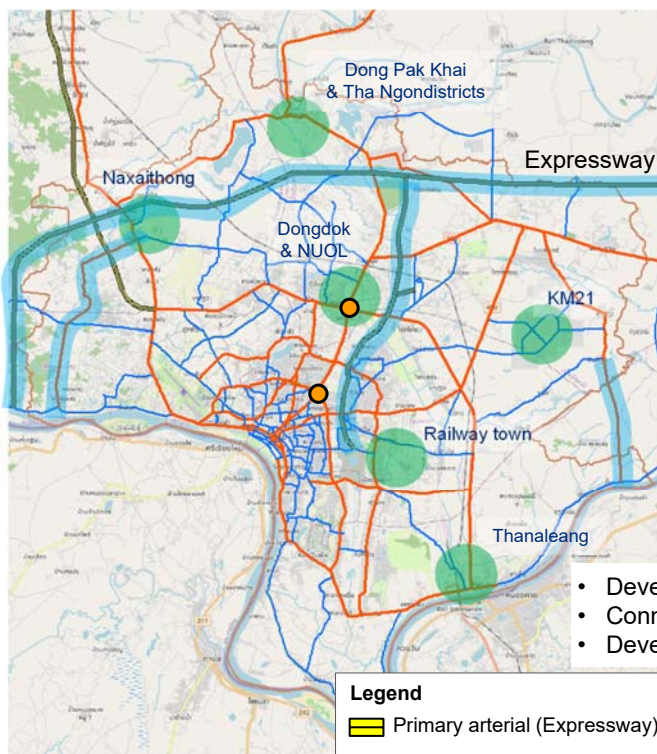
Legend

- Primary arterial (Expressway)
- Arterial road
- Collector road
- Local road
- Signal improvement (in a road network in city center)
- Flyover

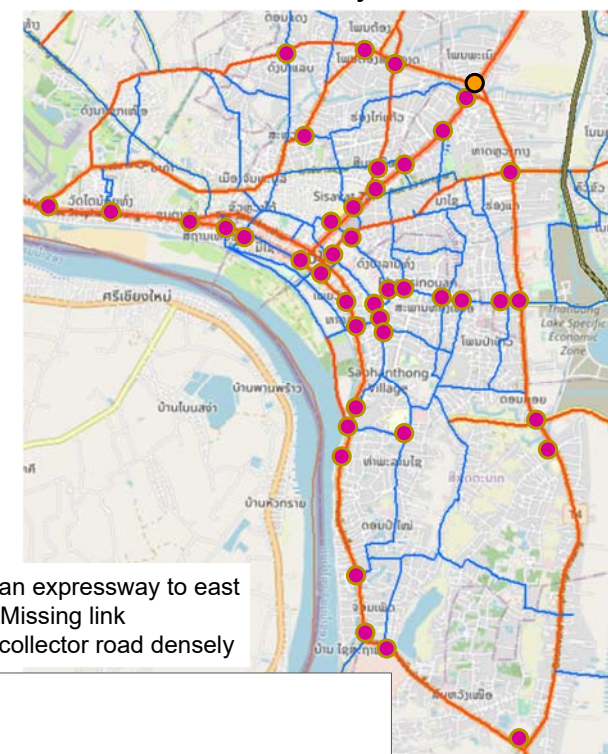
Road Network and Traffic management

Future Road Network in 2040 (Scenario 2 long)

Road Network



Road Network in city center



- Develop an expressway to east
- Connect Missing link
- Develop collector road densely

Legend

- Primary arterial (Expressway)
- Arterial road
- Collector road
- Local road
- Signal improvement (in a road network in city center)
- Flyover

Road Network and Traffic management

Implementation Schedule

Action Plan	Project type	Length (km)	Timing		
			Short	Middle	Long
1. Hierarchical road networks and service integration with public transport					
5 The project to build a road parallel to the Kaisone Rd - That Luang Lake Special Economic Zone - Nongnieng - 450 Year Rd -	Construction	3.7	●		
7 Road Construction project from Dongluang village (R. 13 N)-Dong Xieng Di- Nongphaya	Construction	9.5		●	
9-1 Asphalt Road Construction project from KM29 (R.13 South)-Dong Khwai - Simano (R.11 South).	Construction	3.4		●	
9-2 Asphalt Road Construction project from KM29 (R.13 South)-Dong Khwai - Simano (R.11 South).	Construction	9.4			●
10 Construction of Concrete Road from Nong Buek traffic light-Dong Bong - Tha Savang-Hai village, Xaithany district	Construction	10.7			●
12 Concrete Road Construction Project from Donnoun-Huay Dan Muang	Construction	2.5		●	
13 Concrete Road Construction Project from Huay Dan Muang - DonTiew (Road No. 10).	Construction	2.3		●	
15 450years to No.3	Construction	1.9		●	
20 outside of Central Ring Road Near No.20	Construction	3.6		●	
21-1 collector street between inner and central	Construction	3.6	●		
21-2 collector street between inner and central	Construction	1.4			●
23 Central Ring road	Construction	6.4		●	
27 Radial Road between Inner and Central	Construction	5.2	●		
28 Inner Ring Road	Construction	3.9	●		
29 Outer Ring Road (Eastern Part)	Construction	7.4			●
30 Outer Ring Road (Notrem Part)	Construction	8.7		●	
31 Collector Street between Inner and Central	Construction	4.7	●		
32 collector street between central and Outer ring road	Construction	3.8		●	
33 collector street between central and Outer ring road	Construction	2.9			●
35 collector street between central and Outer ring road	Construction	6.6		●	
36 collector street outside of Outer ring road	Construction	17.8		●	
39 Development with Lao-China Railway Station	Construction	4.9	●		
41 collector street between central and Outer ring road	Construction	1.7	●		
42 Widening (Inner Ring Road)	Widening	1.6	●		
46 Widening (2nd Outer Ring Rd. east)	Widening	0.8	●		

Road Network and Traffic management

Implementation Schedule

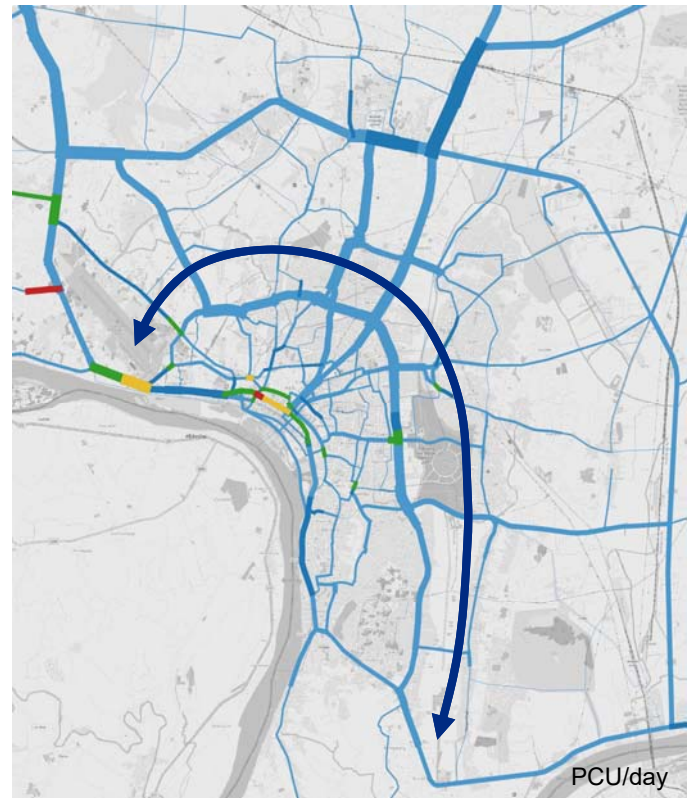
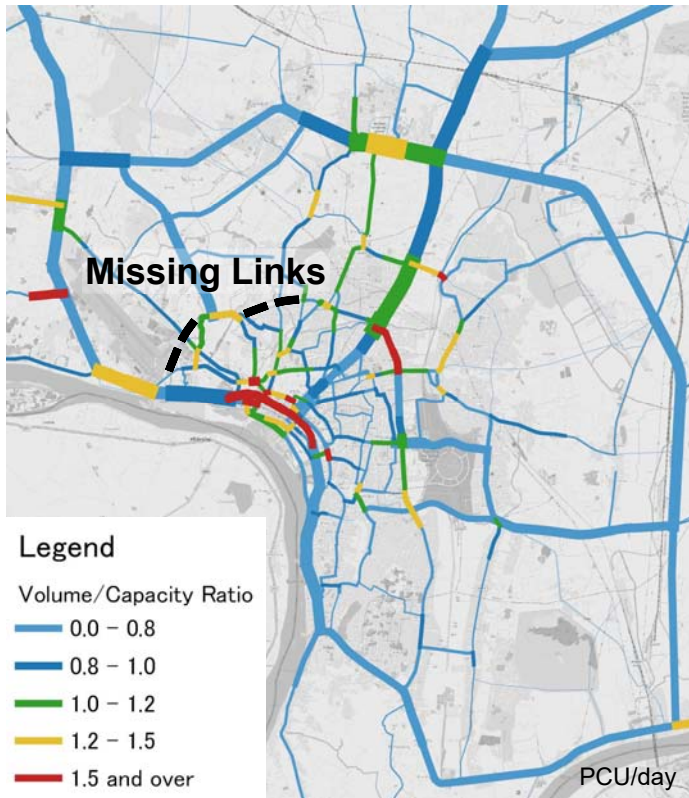
55 Inner roads in KM21	Construction	6.0		●	
56 Expressway project (east direction)	Construction	82.1			●
57 Expressway project (north direction)	Construction	18.1			●
58 Widening for PT project (Around Patousay)	Widening	1.4	●		
59 Widening for PT project (Inner ring Rd.)	Widening	1.2	●		
60 Widening for BRT project (Settathilath Rd.)	Widening	0.5	●		
61 Widening for PT project (Asean Rd.)	Widening	0.1	●		
62 Widening for PT project (2nd Inner ring Rd.)	Widening	6.0	●		
63 Widening for PT project (Inner ring Rd. south)	Widening	6.1	●		
64 Widening for PT project (2nd Inner ring Rd. south)	Widening	12.9	●		
65 Widening for PT project (Riverside Rd. south)	Widening	15.0	●		
66 Widening for PT project (Outer ring Rd. south)	Widening	1.2	●		
67 Widening for PT project (Road in front of Thanaleng station)	Widening	1.0	●		
68 Widening for PT project (Asean palace Rd.)	Widening	5.4	●		
69 Widening for PT project (Radial Rd. from Outer ring to 2nd Outer ring)	Widening	6.0	●		
70 Widening for PT project (Radial Rd. from Outer ring to 450 Khoksa-Ath Rd.)	Widening	2.2	●		
71 Widening for PT project (Outer ring Rd. from Ave. Lang Xang to NUOL)	Widening	1.8	●		
72 Widening for PT project (Outer ring Rd. west)	Widening	10.3	●		
73 Widening for PT project (NH13 from Vang Vieng Expw. entrance to north)	Widening	4.2	●		
74 Widening for BRT project (Khouvieng Rd. in front of CBS)	Widening	1.1		●	
75 Widening for BRT project (Settathilath Rd. west to the airport direction)	Widening	3.8		●	
76 Widening for PT project (Phonetong Rd.)	Widening	2.3		●	
77 Widening for PT project (Radial Rd. north from Outer ring to 2nd Outer ring)	Widening	10.5		●	
78 Widening for PT project (Radial Rd. north on the right of NUOL)	Widening	1.7		●	
79 Widening for BRT project (Rue. Dongpayna)	Widening	2.2		●	
80 Widening for PT project (NH13 from Vang Vieng Expw. entrance to north extension)	Widening	15.2			●
81 Widening for PT project (2nd Outer ring Rd. east)	Widening	5.8			●
82 Widening for PT project (Radial Rd. from 2nd Outer ring Rd.)	Widening	7.5			●

Ref: Traffic Demand Forecast Results

Example of traffic demand forecast result

S1 Do-Minimum (2040)

S2 Public Transport Intensive (2040)



Road Network and Traffic management

2.1 Proper Road Maintenance & Management

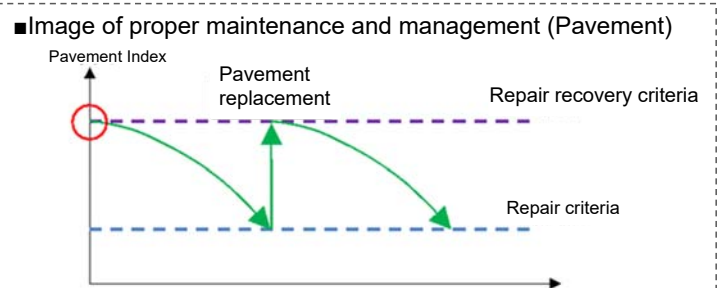
- Proper road pavement, marking and drainage maintenance & management



- Unfunctional Drainage
- Pavement Damage
- Disappeared road marking

Proper maintenance plan

- Periodical inspection and cleaning
 - Durable equipment usage
- Proper road maintenance makes road safe and secure more road capacity



Road Network and Traffic management

3.1 Traffic Control for road safety enhancement

- Capacity development of traffic police
- Improvement of equipment for traffic enforcement



Proper equipment for enforcement on drunk driving



Proper equipment for enforcement on over-speeding

- Capacity development of UTMS
Parking management around BRT dedicated line



Parking sign



Smartphone app for accessing parking service

Road Network and Traffic management

3.2 Traffic Demand Management & Road capacity management

- Traffic demand management
 - Increase parking fee
- Road capacity management
 - 1. Frequent police enforcement against illegal parking

Parking charges for 2020
Proposed increases in Tonbridge & Malling

SHORT STAY	CURRENT	PROPOSED
30 minutes	£0.70	£0.70
1 hour	£1.30	£1.40
2 hours	£2.30	£2.50
3 hours	£3.10	£3.40
4 hours	£3.80	£4.20

LONG STAY	CURRENT	PROPOSED
1 hour	£1.30	£1.40
2 hours	£2.30	£2.50
3 hours	£3.10	£3.40
6 hours	£4.70	£5.30
All day	£5.90	£6.70

Source: <https://www.kentonline.co.uk/malling/news/parking-fees-set-to-increase-in-new-year-219280/>



Source: <https://totallymotor.co.uk/where-to-store-your-car-in-london/>

- 2. Increase parking fine

HIGHER FINES FOR ILLEGAL PARKING
EFFECTIVE JANUARY 7, 2019

	OLD	NEW
Attended vehicles	P200	P1,000
Unattended vehicles	P500	P2,000
Road obstruction	P150	P1,000

Parking is prohibited on:

- All national highways
- Motorway lanes
- All public roads except substations and roads covered by existing parking ordinances.

ABS-CBN NEWS | ABS-CBN NEWS

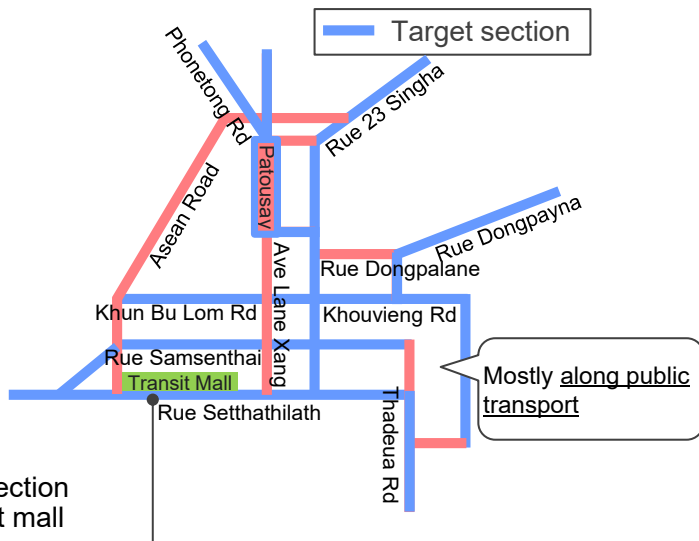
Source: <https://news.abs-cbn.com/>

- Legislation for demand responsive transport
Establish a legislative framework for RHS to be properly operated as urban transport.

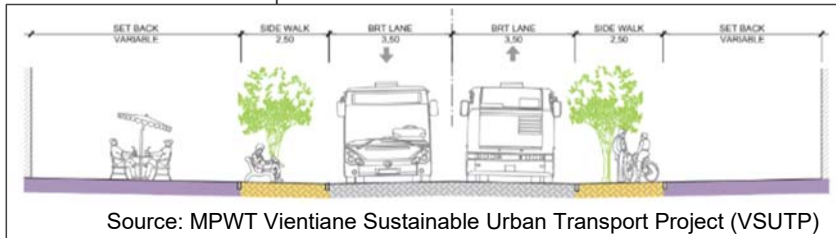
Road Network and Traffic management

4.1.2 Existing sidewalk improvement

- Sidewalk improvement section



Cross section in transit mall



Source: MPWT Vientiane Sustainable Urban Transport Project (VSUTP)

- The image of future sidewalk along public transport

Current situation



After development

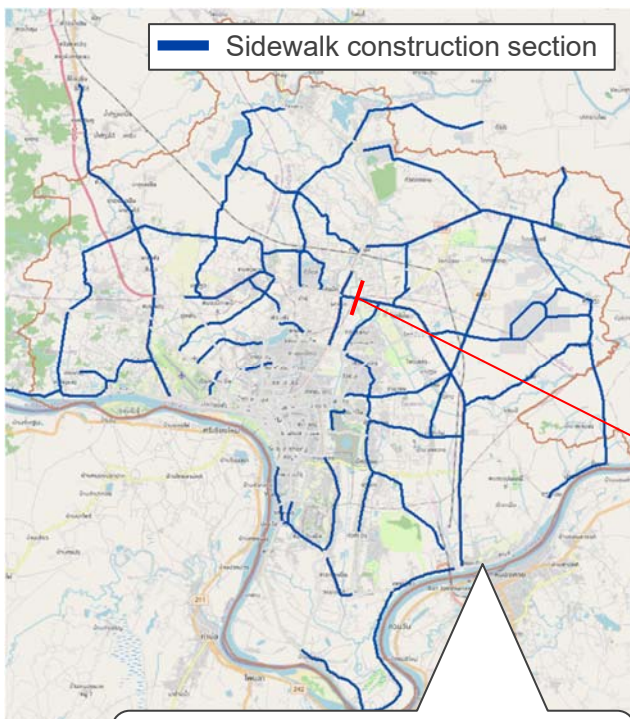


Source: MPWT General Urban Plan of Vientiane Capital 2030
37

Road Network and Traffic management

4.1.1 New sidewalk development

- New sidewalk section

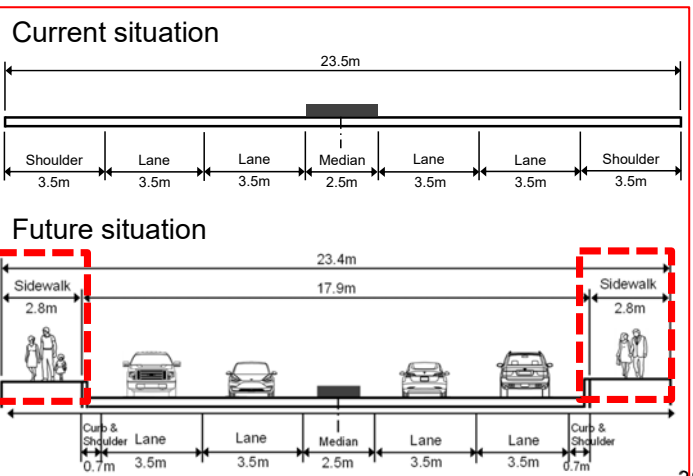


New sidewalk sections are where
• Public transport is planned to be developed



Sidewalk construction

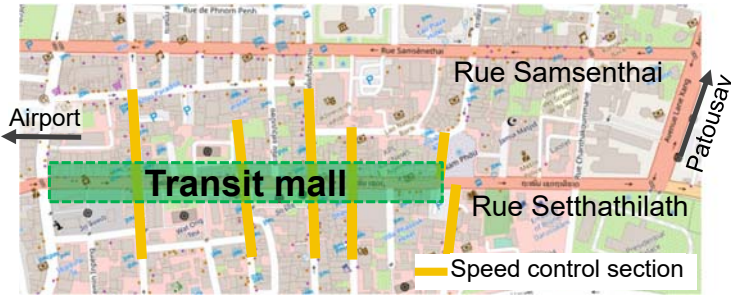
Source: <https://www.clintonnc.com/news/12068/sidewalk-construction-seeks-to-improve-clinton-connectivity>



Road Network and Traffic management

4.2.1 Pedestrian-only streets & Automobile speed control

- Pedestrian-only streets (Transit mall)



Transit Mall in Oakland

Source: American Planning Association Web

- Automobile speed control

Humps



Speed restriction



- Control of on-street parking

Traffic enforcement

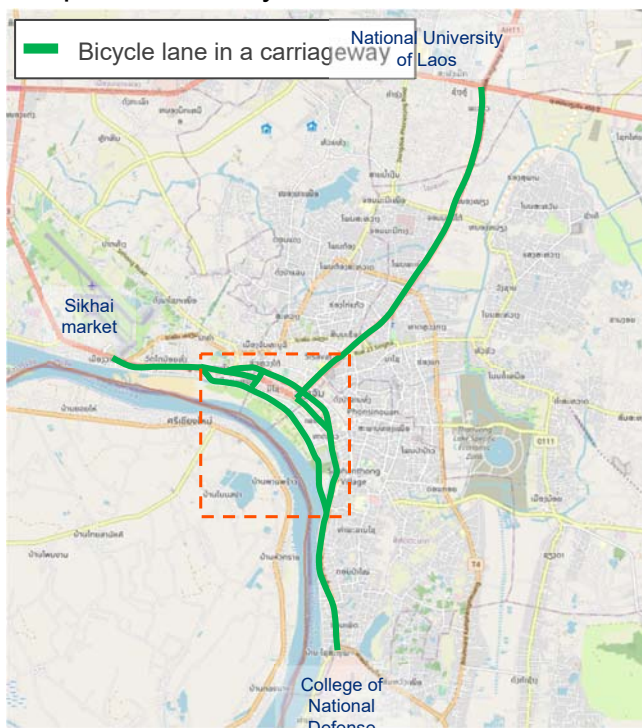


Road Network and Traffic management

5.1.1 Bicycle lanes / paths

- Bicycle lane/path section

Map of whole bicycle lanes



Map of Bicycle lanes in city center



Road Network and Traffic management

5.1.2 Bicycle parking and riding space

- Bicycle parking and riding area
 - Needs to be developed around public transport hubs in suburban area
 - Bicycle commuters can easily transfer to public transport
- Bicycle parking and riding facilities



Bike-n-Ride Shelter in USA
Source: <https://bouldercounty.gov>



Bike parking space
Source: <https://cycle-works.com/products/junior-bike-parking/>

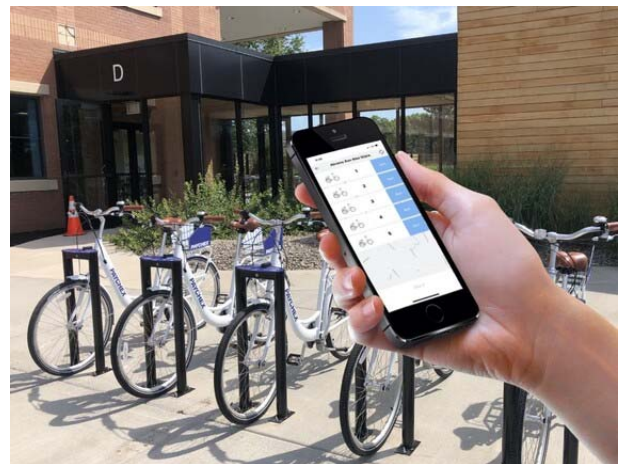
Road Network and Traffic management

5.2.1 Educational activities & Bike share system + MaaS

- Educational activities
Technical support to traffic police
- Bicycle share system
Legislative development



Bike Education Program in educational institutions
Source: <https://roadsafewestgate.org.au>



Bike Share System
Source: <https://onbikeshare.com>

- Preferential policies for bicycle commuting
Discount for public transport usage to Park & Bus ride commuters

Road Network and Traffic management

6.1 Barrier-free access around major transport hubs

- Barrier-free access around major transport hubs
- Securing necessary width of sidewalks
- Non-step bus recommended
- Legislation for barrier-free access



Barrier free access at a transport hub
Source: World bank

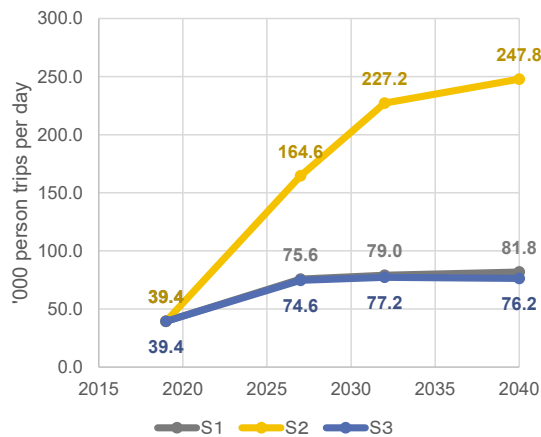


Wide sidewalk in Japan
Source: Minato-city

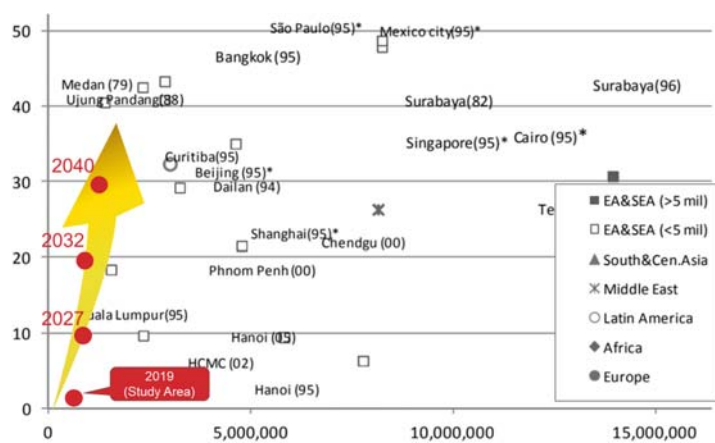
Behavior Change

No	Indicators/Activities		Year 2019	Short-term Target (-2027)	Middle-term Target (-2032)	Long-term Target (-2040)
1	Public transport share	Target	1.4%	10.0%	20.0%	30.0%
		Result	1.4%	10.9%	14.0%	14.2%
2	Population coverage of 500m catchment areas by PT	Target	45.9%	50.0%	55.0%	60.0%
		Result	45.9%	53.6%	60.8%	62.4%

Ref: Number of Daily Passengers



Target of Public Transport Share



Source: The Research on Practical Approach for Urban Transport Planning, JICA, 2011

Why is the “Behavior Change” necessary?

- The results of traffic demand forecasting indicate that even if all of the projects proposed in this Master Plan are implemented, it will be difficult to achieve 30% of public transport share in the future.
- *Impacts of soft components such as Mobility Management (MM) were not considered by simulation
- Therefore, in order to achieve our target, it is important to do what we can to change the mindset of the people living in Vientiane, such as continuing MM.

Behavior Change

Action plan

Strategies

1. Strategic mobility management and travel demand control measures for modal shift to public transport

Action plan

1. Promotion of Public Transport

- Mobility management program
- Branding public transport service projects
- Modal shift programs with MM
- Park & ride (P&R) facility development and promotion program
- Transit mall/pedestrianized street for walkability at the CBD

2. Traffic Demand Management

- Staggered work hours
- Work from home
- Car pool
- Reduction in commuting allowances for car use and increase in it for public transportation use

3. Education

- School education regarding mobility and traffic rules
- School bus promotion

Behavior Change

1. Promotion of Public Transport

Action Plan

1. Mobility management program
2. Branding public transport service projects
3. Modal shift programs with MM
4. Park & ride (P&R) facility development and promotion program
5. Transit mall/pedestrianized street for walkability at the CBD

Mobility management (MM) Program (VTMP)



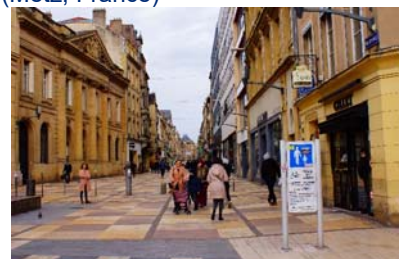
Integrated design of the bus system (Osaka, Japan)



Park and Ride (P&R) facility (Strasbourg, France)



Pedestrianized areas (Metz, France)



Behavior Change

2. Traffic Demand Management

1. Staggered work hours
2. Work from home
3. Car pool
4. Reduction in commuting allowances for car use and increase in it for public transportation use

3. Education

1. School education regarding mobility and traffic rules
2. School bus promotion

Public transport education for kids



Public transport education at Universities



Behavior Change

Implementation Schedule

Proposed Project	Status	Implementing Authority	Short-term 2022~2027	Middle-term 2028~2032	Long-term 2033~2040	Unit
Strategy 2: Strategic mobility management and travel demand and control measures for modal shift to public transport						
PS2-01 Mobility management programs (for residents, workers, and students)	-					
1) -Short	Short	VCSBE	→			5
2) -Middle	Middle	VCSBE		→		5
3) -Long	Long	VCSBE			→	8
PS2-02 Branding public transport services Projects (integrated design, resident and user program, education program)	-					
1) -Short	Short	VCSBE	→			5
2) -Middle	Middle	VCSBE		→		5
3) -Long	Long	VCSBE			→	8
PS2-03 Modal shift programs with MM (Commuting allowance policy revision, commuting bus operations, school bus operations, public events)	-					
1) -Short	Short	VCSBE	→			5
2) -Middle	Middle	VCSBE		→		5
3) -Long	Long	VCSBE			→	8
PS2-04 Park and Ride (P&R) facility development and promotion program	Short		→	→	→	
PS2-05 Transit mall/Pedestrianized street for walkability at the CBD	Short	ADB				