

Minutes of Discussion

Workshop	1st Management Planning Workshop
JICA Expert	Mr. SHIMEGI Natsuki, Corporate Management/ Accounting
Participant	6 persons shown in Participant List
Date/time	19 February, 2014/ 14:00 -16:00
Theme	Management Plan
Agenda	<ol style="list-style-type: none">1. What Management Plan is.2. Review Fundamental Data of the Company3. Exercise to Make Financial Forecast and to Identify the Managerial Issues
Overview	<ol style="list-style-type: none">1. Mr. Shimegi explained about the management plan.

Registration

Meeting Topic: 1st Management Planning Work Shop

Place: VCSBE Meeting Room

Date: 19 February 2014

Time: 14:00 - 16:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
1	Mr. Bounthan SENSACKDAVONG	Director of Finance	VCSBE	22462156		
2	Mr. Kolakai INTHASVONG	Finance	VCSBE	55655236		
3	Ms. Chansouk CHANTHAVONG	Finance	VCSBE	55509120		
4	Mr. Sengvilay	Technical	Planing Division	22203750		
5	Mr. Phonsavanh	Technical	Planing Division	55655087		
6	Ms. Boualam RAJAVONG	Technical	Planing Division	55444877		
7						
8						
9						
10						
11						
12						
13						
14						

1st Management Planning Work Shop

Natsuki SHIMEGI
JICA Expert (Corporate Management/Finance)

Contents of the 1st Management Planning Work Shop

1. Understand the following items relating to a Management Plan.
 - a. Why VCSBE should make a Management Plan?
 - b. What contents should be included in a Management Plan?
2. Review fundamental data of the company
 - a. Financial Statements (B/S, I/S, C/F)
 - b. What is and how much is break-even point?
 - c. Cost structure
3. Exercise to make financial forecast and to identify the managerial issues

1a. Why VCSBE should make a Management Plan?

- ▶ For Stakeholders (Outside)
 - ▶ It is important for all companies to show the direction of management, financial forecasting, fundamental information of management to the stakeholders.
 - ▶ Stakeholders, especially investors and lenders, use these kind of materials for their decision making.
 - ▶ In one word, making a management plan is accountability.
- ▶ For VCSBE Staff (Inside)
 - ▶ It is important to share the view of management team to all staff.
 - ▶ Even in case that company is facing on financial crisis, staff cannot understand the situation if management team does not tell them it.
 - ▶ In one word, making a management plan can be a communication tool.

1a. Why VCSBE should make a Management Plan?

▶ Function of the Management Plan

1b. What contents should be included in a Management Plan?

- ▶ Regulatory restriction
 - ▶ No restriction. It is different from financial accounting which is described in the Accounting Law.
- ▶ Let's see some samples...
 - ▶ BMTA
 - ▶ MRTA (Mass Rapid Transit Authority of Thailand)
 - ▶ JAL (Japan Air Line)
- ▶ In Conclusion, the style is not stylized. Therefore, companies can make it upon request of stakeholders.

1b. What contents should be included in the Management Plan?

- ▶ However, Management Plan of bus company should include the topics at the least...
 - i. Foreword (Head of VCSBE, VC)
 - ii. Business Environment
 - iii. Review the operation and financial results of last ** years
 - iv. Related project and Action Plan and of next 3 years
 - v. Financial forecast and Strategies to achieve it
 - Financial Forecast
 - i. Maximizing Revenue through Improved Competitiveness
 - i. Route Network
 - ii. Services
 - iii. Sales and Marketing
 - Minimizing Cost by Improving Productivity
 - i. Lower Unit Cost
 - ii. Productivity Improvement

2b. What is and how much is the break-even point?

- ▶ Break Even Point (BEP) is...
 - The point at which cost or expenses and revenue are equal
 - BEP can be calculated by
 - a. the amount of Sales
 - b. Fixed cost ratio (or Variable cost ratio, Marginal profit ratio)
 - Critical factor to decide BEP is “cost structure”
 - e.g) Compare two companies which get same revenue.

Items	A	B
Sale	100	100
Cost (Variable, fixed)	20, 50	50, 20
Net Profit	30	30
PEP=F cost/(1-(V cost/Sales))	62.5	40

2b. What is and how much is the break-even point?

- ▶ Let's calculate BEP in VCSBE.
 - But we need to classify all costs to “V cost” and “F cost” in advance.
 - Here, there is a huge problem!
 - What is the “V cost” and “F cost” ??
 - Definition, in general...
 - V costs are “those costs that vary depending on a company's production volume; they rise as production increases and fall as production decreases.”
 - F costs are “expenses that do not change as a function of the activity of a business, within the relevant period.”
 - Which cost can be classified as V cost in VCSBE???

2b. What is and how much is the break-even point?

- ▶ Which cost can be classified as V cost in VCSBE???
 - Fuel (Usually classified as V cost)
 - ↳ sales increase, fuel cost increases???
 - ↳ imagine the case the number of passenger increases from 10 to 20 of each bus.
 - ↳ There is other case that sales increase, but fuel cost decrease due to the unit price change (downslide) of fuel.
 - Spare part (Usually classified as V cost)
 - ↳ Spare part increase when sales increase?
 - ↳ imagine the case bus increase the number of drive with smaller passengers.
 - ▶ VCSBE is different from simple cost structure companies.
 - Let's see the typical paradoxical financial result.
- | | 2009 | 2010 |
|---------------------|----------------|----------------|
| Turn - over | 26,167,424,817 | 24,229,455,904 |
| Operational expense | 19,675,408,952 | 22,380,076,487 |
- Therefore, I can say break-even point analysis, which is often used in many companies, is not so useful method to decide the direction or policy for us.

2c. Cost structure

- ▶ BEP cannot use in VCSBE, so what indicators of costs should we take into consideration?
 - a. Cost structure target
 - The topic of today
 - b. Unit cost (Cost per line/bus)
 - The topic of next work shop
- ▶ In addition to the indicators of costs, other quantitative indicators, such as also should be considered for Management Plan.

2c. Cost structure

- ▶ Cost structure target
 - Historical transition of respective costs proportion (To total revenue)

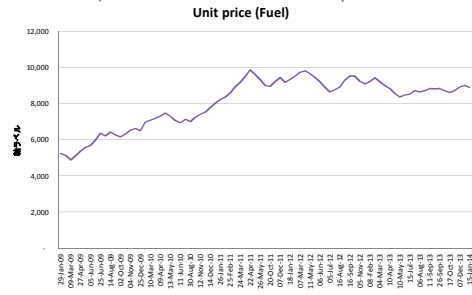
項目	Unit	2009	2010	2011	2012	2013
C 支出		106.32%	124.47%	127.62%	119.65%	120.47%
1 人件費 (Payroll)	ပျော်လှယ်	15.15%	15.43%	16.40%	17.56%	17.15%
2 ဝါးလ်-ထရီဖီ (Oil)	ပျော်လှယ်	3.30%	3.55%	2.99%	2.87%	2.44%
3 ဖြိုနီ (Fuel)	ပျော်လှယ်	41.00%	55.84%	59.61%	61.77%	58.35%
4 နှစ်ပျော် (Spare parts)	ပျော်လှယ်	19.38%	20.19%	23.36%	16.66%	17.38%
5 တီးယျီ (Tyre)	ပျော်လှယ်	5.47%	6.05%	5.11%	5.10%	3.91%
6 အုပ်စု (Admin exp)	ပျော်လှယ်	2.83%	7.13%	3.25%	3.18%	2.76%
7 မှတ်တမ်း (Other)	ပျော်လှယ်	8.95%	6.32%	7.75%	2.56%	2.44%
8 ဖြိုနီ (Welfare and allowance)	ပျော်လှယ်	0.63%	0.54%	0.65%	0.59%	0.61%
9 ဖြိုနီ (Depreciation)	ပျော်လှယ်	7.61%	9.41%	8.50%	9.44%	15.42%

- Historical transition of respective costs proportion (To total cost)

項目	Unit	2009	2010	2011	2012	2013
C 支出 Expenditure		100.00%	100.00%	100.00%	100.00%	100.00%
1 人件費 (Payroll)	ပျော်လှယ်	14.25%	12.40%	12.85%	14.36%	14.24%
2 ဝါးလ်-ထရီဖီ (Oil)	ပျော်လှယ်	3.11%	2.85%	2.34%	2.24%	2.02%
3 ဖြိုနီ (Fuel)	ပျော်လှယ်	40.44%	44.87%	46.71%	51.71%	48.43%
4 နှစ်ပျော် (Spare parts)	ပျော်လှယ်	18.23%	16.22%	18.30%	14.20%	14.43%
5 တီးယျီ (Tyre)	ပျော်လှယ်	5.14%	4.86%	4.00%	4.27%	2.93%
6 အုပ်စု (Admin exp)	ပျော်လှယ်	2.66%	5.73%	2.55%	2.47%	2.29%
7 မှတ်တမ်း (Other)	ပျော်လှယ်	8.41%	5.08%	6.07%	2.14%	2.03%
8 ဖြိုနီ (Welfare and allowance)	ပျော်လှယ်	0.59%	0.44%	0.51%	0.50%	0.51%
9 ဖြိုနီ (Depreciation)	ပျော်လှယ်	7.16%	7.56%	6.88%	7.90%	12.80%

2c. Cost structure

(Reference) Transition of fuel unit price.



2c. Cost structure

- ▶ Q. Which cost proportion should be referred to decide target?
To total revenue or to total cost?
- ▶ Let's think ideal costs proportion in 20XX.

項目		Unit	20XX
C 支出		%	%
1 人件費 (Payrol)	ຜູ້ນຳເລືອນ	%	%
2 オイル・油脂費 (Oil)	ນໍ້າມັນເຄື່ອງ	%	%
3 燃料費 (Fuel)	ນໍ້າມັນກາຊວນ	%	%
4 スペアパーツ (Spare parts)	ອາໄຫວ່	%	%
5 タイヤ費用 (Tyre)	ຢາງວັດ	%	%
6 管理費 (Admin exp)	ເງິນທຳນຽມ	%	%
7 その他 (Other)	ອື່ນໆ	%	%
8 福利厚生費 (Welfare and allowance)	ສະດວກິດການ	%	%
9 減価償却費 (Depreciation)	ຄ່າຫຼຸດຄ່າມັງຄານ	%	%

1. Analysis sheet for expected future

Write down a (medium-term management plan) Historical trends in last 2 years and expected situation after 3 years. After that, determine the strategic issues, and management issues which should be cleared to achieve the financial goal.

BSC	Indicator	Present status			Expected status			Managerial issues disturbing the achievement of the expected
		2 years ago	Last year	Next year end	After 2years	After 3years		
Financial	Sales							
	Operating profit							
Customer	Number of passengers							
	Customer Satisfaction							
Business process	Operation and Planning Div							
	Marketing Div							
	Maintenance Div							
Learning Groth	Driver							
	Safety Driving							

What is needed to resolve the Managerial Issues?

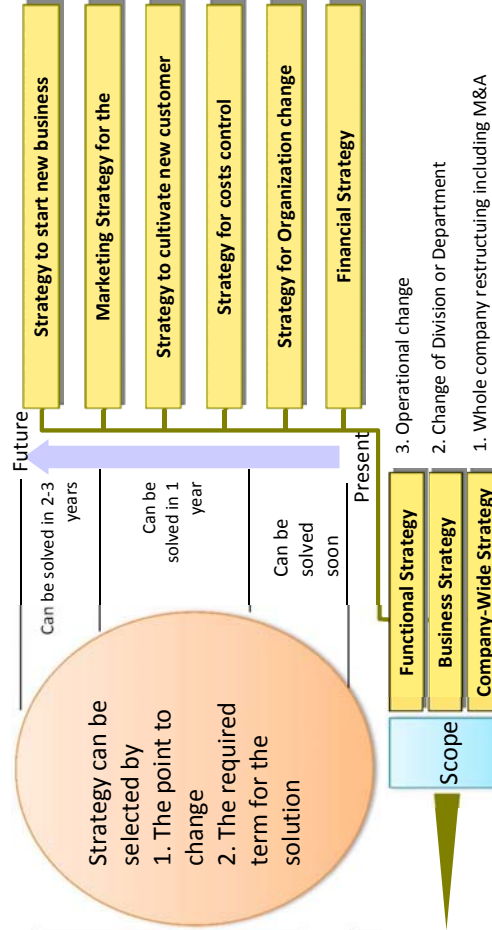
Financial
Customer
Business process
Learning
Groth

Pick up the issue which you think the most important

--

Select a strategy which can resolve the issue.

Required term
Target Scope
Strategy



Photos



Minutes of Discussion

Workshop	2nd Management Planning Workshop
JICA Expert	Mr. SHIMEGI Natsuki, Corporate Management/ Accounting
Participant	7 persons shown in Participant List
Date/time	27 February, 2014/ 14:00 -16:00
Theme	Management Plan
Agenda	<ol style="list-style-type: none">1. Exercise to Make Financial Forecast and to Identify the Managerial Issues2. Obtain and Analyze Information which will Affect the Management of VCSBE in Next 3 Years3. External Environment Analysis
Overview	<ol style="list-style-type: none">1. Mr. Shimegi explained about the management plan.2. Participants exercised financial forecast.

2nd Management Planning Work Shop

Natsuki SHIMEGI
JICA Expert (Corporate Management/Finance)

Contents of the 2nd Management Planning Work Shop

1. Exercise to make financial forecast and to identify the managerial issues
2. Obtain and analyze information which will affect the management of VCSBE in next 3 years.
 - Plan of urban development
 - Plan of other donors' projects
 - Look over and analyze the company's internal and external management environment
3. External environment analysis
 - PEST (Politics, Economics, Society and Technology) analysis
 - 5 Force (Rivalry, Threat of substitutes, Buyer power, Supplier power, and Barriers to entry.) analysis
 - 3C (Customer, Competitor and Company) analysis for marketing

1. Exercise to make financial forecast and to identify the managerial issues

- ▶ Exercise.

2. Obtain and analyze information which will affect the management of VCSBE in next 3 years.

- ▶ Plan of urban development
- ▶ Plan of other donors' projects
- ▶ Look over and analyze the company's internal and external management environment

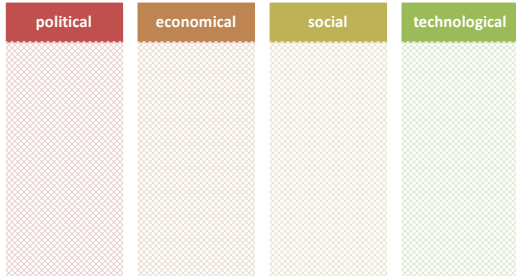
3. External environment analysis

- ▶ PEST (Politics, Economics, Society and Technology) analysis
 - ▶ PEST analysis (political, economical, social, technological) assesses a market, including competitors, from the standpoint of a particular proposition or a business.
 - ▶ Let's practice in the next page
- ▶ 5 Force (Rivalry, Threat of substitutes, Buyer power, Supplier power, and Barriers to entry.) analysis
- ▶ 3C (Customer, Competitor and Company) analysis for marketing

3. External environment analysis (Sample topics)

political	economical	social	technological
<ul style="list-style-type: none"> •ecological/environmental •current legislation •future legislation •international legislation •regulatory bodies and processes •government policies •government term and change •trading policies •funding, grants and initiatives 	<ul style="list-style-type: none"> •economy trends •overseas economies •general taxation •taxation specific to product/services •seasonality issues •market/trade cycles •specific industry factors •market routes trends •distribution trends •customer/end-user drivers •interests/ exchange rates •international trade and monetary issues 	<ul style="list-style-type: none"> •lifestyle trends •demographics •consumer attitudes and opinions •media views •law changes affecting social factors •brand, company, technology image •consumer buying patterns •fashion and role models •major events and influences •buying access and trends •ethnic/religious factors •advertising and publicity •ethical issues 	<ul style="list-style-type: none"> •competing technology development •research funding •associated/dependent technologies •replacement technology/solutions •maturity of technology •manufacturing maturity and capacity •information and communications •consumer buying mechanisms/technology •technology legislation •innovation potential •technology access, licensing, patents •intellectual property issues •global communications

3. External environment analysis (Exercise)



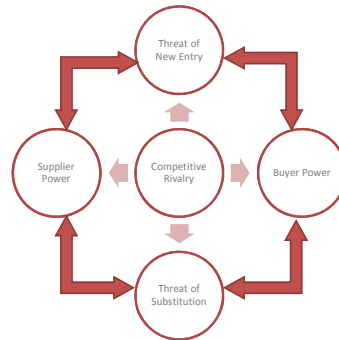
3. External environment analysis (5 Force)

- ▶ 5 Force (Rivalry, Threat of substitutes, Buyer power, Supplier power, and Barriers to entry.) analysis
 - i. **Supplier Power:** Here you assess how easy it is for suppliers to drive up prices. This is driven by the number of suppliers of each key input, the uniqueness of their product or service, their strength and control over you, the cost of switching from one to another, and so on. The fewer the supplier choices you have, and the more you need suppliers' help, the more powerful your suppliers are.
 - ii. **Buyer Power:** Here you ask yourself how easy it is for buyers to drive prices down. Again, this is driven by the number of buyers, the importance of each individual buyer to your business, the cost to them of switching from your products and services to those of someone else, and so on. If you deal with few, powerful buyers, then they are often able to dictate terms to you.

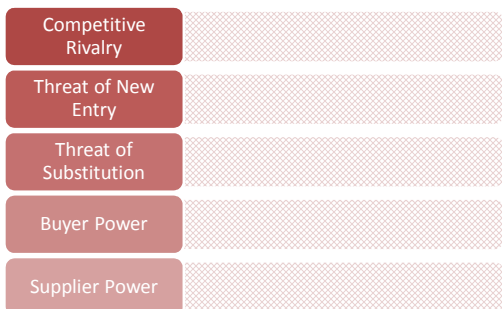
3. External environment analysis (5 Force)

- iii. **Competitive Rivalry:** What is important here is the number and capability of your competitors. If you have many competitors, and they offer equally attractive products and services, then you'll most likely have little power in the situation, because suppliers and buyers will go elsewhere if they don't get a good deal from you. On the other hand, if no-one else can do what you do, then you can often have tremendous strength.
- iv. **Threat of Substitution:** This is affected by the ability of your customers to find a different way of doing what you do – for example, if you supply a unique software product that automates an important process, people may substitute by doing the process manually or by outsourcing it. If substitution is easy and substitution is viable, then this weakens your power.
- v. **Threat of New Entry:** Power is also affected by the ability of people to enter your market. If it costs little in time or money to enter your market and compete effectively, if there are few economies of scale in place, or if you have little protection for your key technologies, then new competitors can quickly enter your market and weaken your position. If you have strong and durable barriers to entry, then you can preserve a favorable position and take fair advantage of it.

3. External environment analysis



3. External environment analysis



Photos

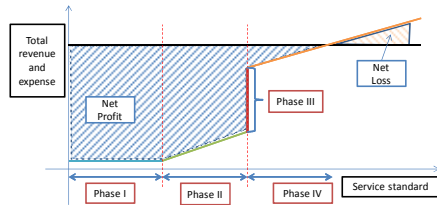


Minutes of Discussion

Workshop	3rd Management Planning Workshop
JICA Expert	Mr. SHIMEGI Natsuki, Corporate Management/ Accounting
Participant	6 persons shown in Participant List
Date/time	26 March, 2014/ 9:00 -11:00
Theme	Management Plan
Agenda	<ol style="list-style-type: none">1 . Revenue and Cost Structure for the University Bus Pass2 . Pricing of Bus Pass3 . Points to be Considered
Overview	<ol style="list-style-type: none">1 . Mr. Shimegi explained about the management plan.

1. Revenue and Cost structure for the University Bus Pass

The image of the relationship between total revenue and additional expenses for managing the university bus pass is thought as following.



1. Revenue and Cost structure for the University Bus Pass

Revenue: Price * the number of students

Expense:

Phase I = Expenses only for issuing ticket and related commission fee occur just after the system starts.

- ▶ Main items: paper, the commission to university if they collect the fare.

Phase II= Additional bus operation service expenses to respond to the request of university such as creating new route for university or additional bus operation for the increased passengers.

- ▶ Main items: fuel, driver's salary for overtime if bus company extends the operation hour.

Phase III= VCSBE purchases new buses to respond to the request of university or to increase the variety of bus input.

- ▶ Main items: bus

Phase IV= Additional bus operation service expenses to respond to the request of university. However, decreasing the fuel cost ratio may be possible due to the low fuel consumption if VCSBE buys fuel-efficient buses such as TOYOTA Coaster.

- ▶ Main items: fuel, additional parking or workshop if necessary, driver's salary for new bus

2. Pricing of Bus Pass

Revenue=Price * the number of students

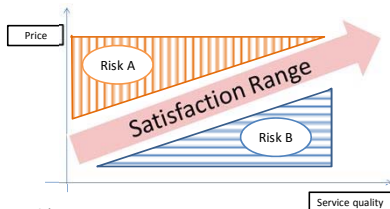
■ Price

- ▶ In many of other case, companies set the price based on the cost-recovery model (e.g. use marginal cost or average cost) including MPWT formula or other economic models.
- ▶ However, in the case of the University Bus Pass, the cost-recovery model cannot be used because the structure of the revenue and cost structure is irregular.
- ▶ Therefore, VCSBE should suggest own opinion to the NUOL.
 - ▶ As the reference, in management working group, almost all participants stated that 200USD for 4 years is reasonable.
 - ▶ From my calculation of some model student cases, I think 200USD sounds reasonable.
- ▶ VCSBE should consider the risks of each case of pricing as following.

2. Pricing of Bus Pass

Model	1	2	3	4	5	6	7
Condition	Everyday go to univ by bus 1time/week to Thalat Sao 1time/month to Thailand	Everyday go to Dongkok by bus	Everyday go to the faculty of Engineering from CBS	1time/week to Thalat Sao 1time/month to Thailand	1time/week to Thalat Sao	2times/month to Thailand	No use
*detailed prerequisite	+ Go to Dongkok campus + Exclude holidays and vacation + Use bus during shopping to Thalat sao (once per week) and Thailand (once per Thailand)	+ Go to Dongkok campus + Exclude holidays and vacation	+ Go to engineering faculty campus + Exclude holidays and vacation	+ Go to Thalat Sao for shopping every weekend + Go to Thailand for shopping monthly	+ Go to Thalat Sao for shopping every weekend	+ Go to Thailand for shopping every 2 week	
Frequency (days/year)	239	174	174	65	52	26	0
Price (Single)	3,000(NUOL) or 6,000(Friendship)	3,000	2,000	3,000(Thalat sao) or 6,000(Friendship)	3,000	6,000	
Price (Return)	6,000(NUOL) or 12,000(Friendship)	6,000	4,000	12,000(Friendship)	6,000	12,000	
1 year	1,433,929	1,042,857	695,238	469,286	312,857	312,857	0
4 years (4tp)	5,735,714	4,171,429	2,780,952	1,877,148	1,251,429	1,251,429	0
USD	717	521	348	235	156	156	0

2. Pricing of Bus Pass



Risk category A

- There is a risk that the supply of bus is less than the demand
- When VCSBE receive this kind of complains from students or university, it is necessary for VCSBE to think 1) add new route 2) increase the number of bus operation in a certain route 3) increase the number of buses

Risk category B

- There is a risk that VCSBE provide too much service for their request and may lead the net loss.
- To prevent this risk, forecast of the increasing passengers is quite important and need to avoid too much discount.

3. Points to be considered

- Regarding this pass system, though there are some risks, VCSBE can stand on the dominant position because VCSBE can control not only the price but also the service standard which is advantageous to VCSBE.
- To avoid the risks, Managements need to think twice the proposal of price before discussing with NUOL. I suggested the one opinion from WG but it's not the assured or last answer.
- It is necessary to start to discuss with VC and MPWT.
- To collect money, VCSBE must argue the process with NUOL. There are some way for this.
 - A) VCSBE collects it from students.
 - B) NUOL collects it from students.
 - C) Other third party such as a commercial bank collect it.
- VCSBE must consider the cost and benefit of each case.
- After decide the way of collection, following items should be discussed.
 - I. Make a contract.
 - II. Set the criteria for the exemption or reduction for the low income families.
 - III. Print and provide the actual tickets
 - IV. Set the actual settlement day or the collecting period, and settle on the day.
 - V. The way of following up the unpaid students.

Photos



Minutes of Discussion

Workshop	Consensus building on Management Plan and Finance
JICA Expert	Mr. SHIMEGI Natsuki, Corporate Management/ Accounting
Participant	9 persons
Date/time	13 November, 2014/ 9:00 -11:00
Theme	Management Plan
Agenda	1 . Management Plan
Overview	1 . Mr. Shimegi explained about the management plan.

Registration

Meeting Topic:

Place: VCSBE Meeting Room

Date: 13 November 2014

Time:

ວ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
1	Mr. Buapha PHETVISAY	Deputy director	VCSBE			
2	Mr. Vanly CHANCHALERN	Deputy director	VCSBE			
3	Mr. Bounthan SENSACKDAVONG	Chief of Finance Section	VCSBE			
4	Mr. Bounngu THAMMASARD	Personen Section	VCSBE			
5	Mr. Pannha VIRATHAM	Planing Section	VCSBE			
6	Mr. Thanongsy DEDVONGSONE	Chief of City Bus Division	VCSBE			
7	Mr. Duangta Southkhamhak	Admin	VCSBE			
8	Mr. Korlakai INTHAVONG	Finance Section	VCSBE			
9	Mr. Pongsavanh INTHAVONGSA	Lecturer	Faculty of Engineering			
10	Mr. SHIMEGI Natsuki	Corporate Management/ Accounting	JICA Study Team			
11						
12						
13						

Photos



Minutes of Discussion

Workshop	Report of Progress of Management Plan
JICA Expert	Mr. SHIMEGI Natsuki, Corporate Management/ Accounting
Participant	18 persons
Date/time	21 November, 2014/ 9:00 -11:00
Theme	Tax Concession
Agenda	1 . Management Plan
Overview	1 . Mr. Khamphone explained about the management plan.

Registration

Meeting Topic:

Place: VCSBE Meeting Room

Date: 21 November 2014

Time:

ວ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
1	Mr. Yuzurio Susumu	Senior Representative	JICA Laos Office			
2	Dr. Akiko KISHIUE	Project Formulation Advisor	JICA Laos Office			
3	Mr. TODA Toshinori	Team Leader	JICA Study Team			
4	Mr. Yashiro Shuichi	Transport and Traffic Plan	JICA Study Team			
5	Mr. SHIMEGI Natsuki	Corporate Management/ Accounting	JICA Study Team			
6	Mr. Khamphoune TEMERATH	Director	VCSBE			
7	Mr. Bounpone FONGMANY	Deputy director	VCSBE			
8	Mr. Buapha PHETVISAY	Deputy director	VCSBE			
9	Mr. Vanly CHANCHALERN	Deputy director	VCSBE			
10	Mr. Somsarith HOUATHONGKHAM	Officer of transport sector	DPWT			
11	Mr. Puttasay SIRISACK	Officer of planning and budgeting division	DOT			
12	Mr. Thanongsy DEDVONGSONE	Chief of City Bus Division	VCSBE			
13						

Registration

Meeting Topic:

Place: VCSBE Meeting Room

Date: 21 November 2014

Time:

ວ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
14	Mr. Bounthan SENSACKDAVONG	Chief of Finance Section	VCSBE			
15	Mr. Vongphachanh Insivilath	Deputy Chief of Finance Section	VCSBE			
16	Mr. Pannha VIRATHAM	Planing Section	VCSBE			
17	Mr. Keedaeng VONGDONXAI	Chief of Section od Spare Parts	VCSBE			
18	Mr.Bounngu THAMMASARD	Personen Section	VCSBE			
19	Mr.Khamsean Vilasack	Chief of Technical Section	VCSBE			
20	Mr.Bounma Vilavong	Chief of Personen Section	VCSBE			
21	Mr.Duangta Southkhamhak	Admin	VCSBE			
22	Mr. Pongsavanh INTHAVONGSA	Lecturer	Faculty of Engineering			
23						
24						

Photos



Regular Meeting

Date: 13 March, 2012, Monday, 2:00pm

Place: VCSBE

Agenda

1. Preparation of New bus operation
 - 1) Parking space for New 42 buses
 - 2) Temporary Bus stop near Central Bus Station during CBS construction
 - 3) Allocation of Dongdok Bus terminal
 - 4) Road condition of each bus route
 - Nongteng (Route 49)
 - Thongpong (Route 30)
 - Thadeua (Route 14, between Friendship bridge and thadeua)
 - Thangone (Route 23)
 - 5) Schedule of Employ and training of new bus drivers and conductors
 - 6) Target date of commencement of new bus operation

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

Meeting Records

Time/Date: Monday, 13 March 2012, 14:00-15:45

Place: VCSBE Meeting Room

Participants:

VCSBE	Mr. Bounpone FONGMANY, Deputy Director Mr. Vanlee CHANCHALEUN, Deputy Director Mr. Bounpha PHETVIXAY, Deputy Director
DPWT/VC	Mr. Somsanith HUADTHONGKHAM Mr. Khamphay SOUVATDY
Road Sector, DPWT/VC	Mr. Phouvieng
JICA Project Team	Mr. MURAKAMI Tadaaki, Bus Route and Operation

1. Road conditions of bus route

✚ Mr. Murakami interviewed Mr. Phouvieng about road condition where will be operated new bus included road to Nongteng, Thongpong, Thadeua and Thangone

✚ Mr. Phouvieng confirmed about road condition as below:

- Route No.13 (Thongpong): National Road has a width of 11meters with pavement. The road between national road and Thongpong has been already improved and has a width of 6~9 meters with pavement.
- Route No.49 (Nongteng): The road between National road and Nongteng is currently under construction which is expected to be completed by end of 2013. The road will be paved and width of road will be 9 meters carriageway and 1.5 meters sidewalk of both sides.
- Route No.14 (Thadeua): The section between Friendship bridge and Thadeua is still rough dart though road improvement was planned to be done on last year. And until now they don't have any source of budget to improve mentioned section.
- Route No.23 (Thangon): The road has a width of 10 meters with pavement.

2. Bus operation in rough road section

✚ Mr. Murakami introduced the road condition in Nongteng, Thongpong, Thadeua and Thangone to member of meeting.

✚ Mr. Bouapha recommended that route to Nongteng would be operated medium bus with 25 seats since the road is still under construction.

✚ The member said that to operation new large size bus from CBS to Thadeua is will be difficult since road section from friendship bridge to Thadeua (Xiengkhuon Village) is rough dart so they supposed to operate new large size bus from CSB to friendship bride and switch to mini bus for passenger who want to continue travel to thadeua

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

(Xiengkhuang Village) but the problem is no space available for bus terminal at friendship bridge, only bus stop available but they are not allowed to stop more than 10 minutes so counterpart are going to continue discuss with concerned part to provide priority to stay longer at the bus stop.

3. Parking space for new 42 buses

- ✚ Mr. Murakami asked about allocation space for 42 buses parking.
- ✚ Mr. Buapha confirmed that parking space for new 42 buses will be separated in two places, one part will be parked in VCSBE and another part will be parked at ex northern bus station (T2). And after new CBS building completed the T2 bus station will not be used at all

4. Temporary Bus stop near CBS during CBS construction

- ✚ Mr. Murakami asked about location of temporary bus stop nearby CBS during new CBS building under construction.
- ✚ Mr. Bounpone informed that Mr. Khamphoune, last week, has requested permission from vice mayor of Vientiane Capital to determine temporary bus stop on Khouvieng road. However, the result from vice mayor will be informed again on next regular meeting

5. Expected schedule of new bus operation

- ✚ Mr. Bounpone informed that they supposed to operation new bus service immediately after handover ceremony but this plan is still need to considered by high ranking level. He also mentioned that most of driver for new bus will be the driver who working for VCSBE with driving skill and they will recruit new driver for old buses so they expected training for driver should be about one week.

The meeting was adjourned at 3:45 pm.

The Project to Enhance the Capacity of
Vientiane Capital State Bus Enterprise
<Bus Route and Operation>

Preparation of New bus operation
Feb.2012~July 2012

JICA Project Team

1

Proposed Schedule

	Feb	March	April	May	June	July
1. Preparing bus parking			Where?			
2. Preparing renovation of a maintenance shop						
3. Compiling a plan of vehicle conservation						
4. Compiling a plan of vehicle operation						
5. Drivers' training (incl. Conductors)						
6. Optimizing bus stop locations						
7. Public relationship campaign						
New bus operation						When?

JICA Project Team

2

The subjects which should be solved
before New Bus arrives (1/2)

- Please check whether an operation plan suits the large size bus.
 - Narrow & Rough dirt road sections in 5 routes.
 - Bus operation during CBS construction.
- Please draw up a plan which is used in the construction period of new CBS.
 - Temporary bus stop plan at existing CBS.
 - Temporary operation plan using a temporary bus stop.

JICA Project Team

3

The subjects which should be solved
before New Bus arrives (2/2)

- Please check a procedure of the staff training for the large size bus.
 - Training, learning and practice for New bus.
 - New conductors are also needed for new bus which has 2 doorways.
- please perform a optimization of bus stop locations.
 - If road width is not enough to stop the large size bus, bus stop may be relocated.

JICA Project Team

4

Bus Operation Plan

- Rough Dart Section
 - Is there any section where road improvement or route rearrangement is required for the large size bus?
- Narrow road Section
 - Is there narrow section where the large size buses can not pass each other?
 - In narrow road section, the large bus may not be able to stop.

JICA Project Team

5

Bus Operation Plan

- Turn around point
 - Does each route have enough space for U-turn by the large bus at the end of the route?



Route 14



Route 20



Route 32



Route 23

JICA Project Team

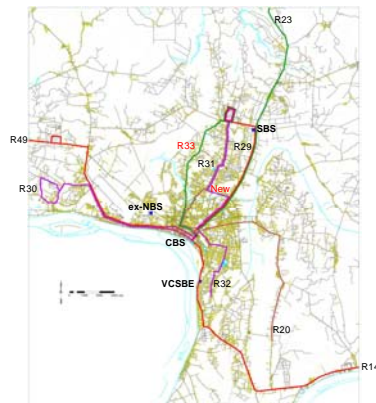
6

Bus Operation Plan

- Critical points for the large size bus in each route will be found by site survey and driver interview survey.
- If the modification of routes are required, the following should be clarified.
 - Procedure for route change.
 - An alternate plan to cover the demand if some sections will be eliminated from the large bus route.
 - Possibility of road improvement by VC.

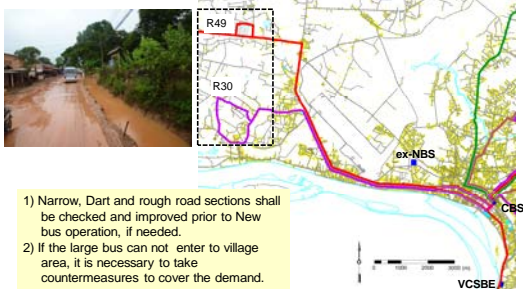
JICA Project Team

7



8

Route 49 & Route 30



JICA Project Team

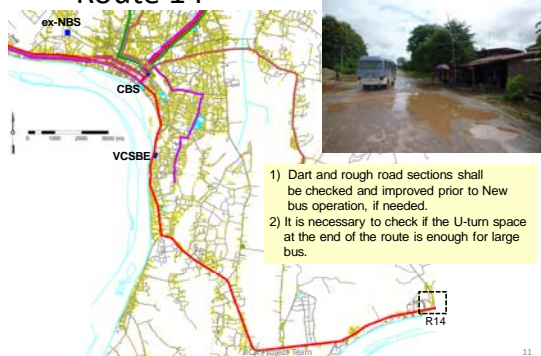
9



JICA Project Team

10

Route 14



11



JICA Project Team

12

Route 23

1) It is necessary to check if the road width in village area is enough for large bus.
2) It is necessary to check if the U-turn space at the end of the route is enough for large bus.

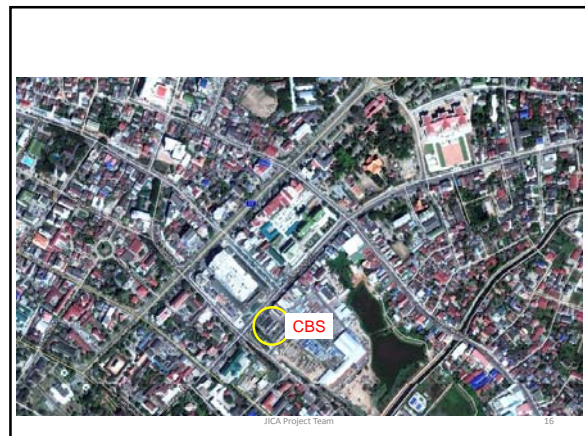
JICA Project Team 13



Plans as for Temporary CBS

- Good accessibility to Morning Market shall be secured.
- Temporary bus-bay shall have the space for loading of the passengers' baggage to buses.
- From the safety point of view, temporary bus-bay will not be able to be beside CBS which is construction site.
- Distance between CBS and ex-NBS is 5km.

JICA Project Team 15



CBS~Dongdok

Route	No. of buses	No. of trips/day
CBS-Dongdok No.29 (13km)	7	45
CBS-Hong Saeng-Dongdok New (12km)	3	24
CBS-Phontong-Dongdok No.31 (13km)	6	38
CBS-Nongtha-Dongdok No.33 revival (14km)	3	18
Total	19	125

1) About 50% of new buses and trips will be concentrated to CBS-Dongdok. (Bus: 19 / 42 = 45%, Trip: 125/244 = 51%)
2) During a CBS building construction, temporary bus stop will be used instead of CBS. Bus operation schedule will be controlled at Dongdok side.
3) Please let us know where New Dongdok bus-terminal at Dongdok will be.

JICA Project Team 17

JICA Project Team 18

Regular Meeting

Time/Date: Wednesday, 9 May, 2012, 14:00 -

Place: VCSBE Meeting Room

Agenda

- Comments for CBS proposal
 - Brief explanation of Good Public Transport Facility
 - Explanation of comment by JICA expert
 - Discussion on Bus operation requirements
 - Issue and Comments by counterpart members

- Clarification of proposed CBS
 - Date to submit comments
 - What is supposed to happen Next?
 - Process to get finalize CBS proposal

- Others

- Next meeting

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

Meeting Records

Time/Date: Monday, 13 March 2012, 14:00-15:45
Place: VCSBE Meeting Room

Participants:

VCSBE	Mr. Bounpone FONGMANY, Deputy Director Mr. Vanlee CHANCHALEUN, Deputy Director Mr. Bounpha PHETVIXAY, Deputy Director
DPWTVC	Mr. Somsanith HUADTHONGKHAM Mr. Khamphay SOUVATDY
Road Sector; DPWTVC	Mr. Phouvieng
JICA Project Team	Mr. MURAKAMI Tadaaki, Bus Route and Operation

- Road conditions of bus route
 - Mr. Murakami interviewed Mr. Phouvieng about road condition where will be operated new bus included road to Nongteng, Thongpong, Thadeua and Thangone
 - Mr. Phouvieng confirmed about road condition as below:
 - Route No.13 (Thongpong): National Road has a width of 11meters with pavement. The road between national road and Thongpong has been already improved and has a width of 6-9 meters with pavement.
 - Route No.49 (Nongteng): The road between National road and Nongteng is currently under construction which is expected to be completed by end of 2013. The road will be paved and width of road will be 9 meters carriageway and 1.5 meters sidewalk of both sides.
 - Route No.14 (Thadeua): The section between Friendship bridge and Thadeua is still rough dart though road improvement was planned to be done on last year. And until now they don't have any source of budget to improve mentioned section.
 - Route No.23 (Thangon): The road has a width of 10 meters with pavement.
- Bus operation in rough road section
 - Mr. Murakami introduced the road condition in Nongteng, Thongpong, Thadeua and Thangone to member of meeting.
 - Mr. Bouapha recommended that route to Nongteng would be operated medium bus with 25 seats since the road is still under construction.
 - The member said that to operation new large size bus from CBS to Thadeua is will be difficult since road section from friendship bridge to Thadeua (Xiengkhuang Village) is rough dart so they supposed to operate new large size bus from CSB to friendship bride and switch to mini bus for passenger who want to continue travel to thadeua

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

(Xiengkhuang Village) but the problem is no space available for bus terminal at friendship bride, only bus stop available but they are not allowed to stop more than 10 minutes so counterpart are going to continue discuss with concerned part to provide priority to stay longer at the bus stop.

- Parking space for new 42 buses
 - Mr. Murakami asked about allocation space for 42 buses parking.
 - Mr. Bouapha confirmed that parking space for new 42 buses will be separated in two places, one part will be parked in VCSBE and another part will be parked at ex northern bus station (T2). And after new CBS building completed the T2 bus station will not be used at all
- Temporary Bus stop near CBS during CBS construction
 - Mr. Murakami asked about location of temporary bus stop nearby CBS during new CBS building under construction.
 - Mr. Bounpone informed that Mr. Khamphoune, last week, has requested permission from vice mayor of Vientiane Capital to determine temporary bus stop on Khouvieng road. However, the result from vice mayor will be informed again on next regular meeting
- Expected schedule of new bus operation
 - Mr. Bounpone informed that they supposed to operation new bus service immediately after handover ceremony but this plan is still need to considered by high ranking level. He also mentioned that most of driver for new bus will be the driver who working for VCSBE with driving skill and they will recruit new driver for old buses so they expected training for driver should be about one week.

The meeting was adjourned at 3:45 pm.

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

- Bus bay design: JE pointed out the existing design and the way they park perpendicularly is not safe for passenger waiting at bus. It has been discussed the need to redesign to secure safety for passenger as well as for driver. Especially, when the bus driver turning back.
- Safety for pedestrian: JE have pointed out that too many people walking around the site. CP agreed that SAFETY is the priority issue for the proposed CBS.
- Access for disability: JE have addressed issue on mobility impaired. CP have agreed to consider accessibility for disabled where possible.
- Temporary bus waiting space: JE has requested CP to clarify how much space required for bus waiting space.
- Front face of CBS: JE has questioned where front of CBS is. CP have agreed that Front face of CBS to be toward morning market.
- Mr. Khamphoune had proposed the extending of land use, he proposed to remove area where existing garden for temporary.

JICA expert have requested to CP to continue discuss about issue on existing CBS and reflect to CBS proposed.

4. Next meeting

JICA expert have requested for the next meeting to be hold 17th or 18th May and tentative agenda to be showing good example of public transport facility, explanation of planning and design process.

- The meeting was adjourned at 15:40 pm.

Regular Meeting

Time/Date: Friday, 18 May, 2012, 14:00 -

Place: VCSBE Meeting Room

Agenda

- Review of Good Public Transport Facility
- Example of Good Public Transport Facility
- Broad principle of how good Public Transport Facility is shaped in UK
- Recommendation
 - Clarification for CSB development
 - Tasks to carry out for CSB development
 - Discussion
- Work and Assignment schedule
- Others

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

Meeting Records

Time/Date: Friday, 18 May, 2012, 14:00 - 16:05

Place: VCSBE Meeting Room

Objectives: Discussion on CBS proposal

Participants:

VCSBE	Mr. Khamphoune TEMERATH, Director Mr. Bouapha PHETVISAY, Deputy Director Mr. Vantee CHANCHALEUN, Deputy Director
DPWT/VC	Mr. Khamphay SOUVATDY
DoT/MPWT	Mr. Lieng Monthalath
JICA Project Team	Ms. MIYAKAWA Akiko, Transportation Facility Plan

1. Today agenda was the revision of good public transport facility planning and design and following a slideshow of some design examples of good public transport facility case study in the United Kingdom

At the beginning, Ms. Miyakawa (JE) had presented brief review of good public transport facility planning and design and showed them to all of counterpart member about some ideas of good public transport facility case study in the United Kingdom how the UK had been forecasted about their planning and design when they decided to integrate their two big shopping center and their public transport facility with other interchange. Moreover, she also had indicated how they integrated domestic bus terminal and rail terminal with a big shopping center. (Presentation slides attached)

In addition, it should be where open space area, the UK had separated bus lane and private car, which indicated by color, tidy, wide space and surface between terminal and road were totally different, materials for ceiling bright enough light whether day time and night time in order to attract more public user. Also, sign that indicate the symbol should be indicated simply understanding about the destination with all route connections and transport facility.

Ms. Miyakawa (JE) had considered from this case study for the VCSBE and counterpart members (CP) would get some ideas to adapt this idea to develop planning and design for CBS proposal.

The VCSBE and counterpart members (CP) had discussed for above mentioned would be considered more about planning and design, and all regulation that would be applied to CBS proposal. After that, Mr. Khamphoune mentioned he would be the one that would comment about redesign with Vietnamese consultant.

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

2. Ms. Miyakawa (JE) had explained how this can happen and control of the project. She gave some example for statutory authority approval process in order to express the VCSBE and counterpart to have an idea of the current project positioning. (Presentation slides attached)

She had indicated design and quality control for best practice guideline by Transportation for London (TfL) for an example what the UK had been considered as the significant factors are efficiency, usability, understanding and quality before upstage to implementation stage, completion stage, and operation and maintenance stage. Also, planning process how long it should take from pre-application stage to decision making stage, which able to specific time line.

Moreover, VCSBE and counterpart members (CP) had informed JICA Expert about decision making process there were only three parties on decision making involve MPWT, DoT VCO, and the Mayor of Vientiane Capital. Before construction permission, these authorities have to consider decision making process, they have to get some technical cooperation comments from VCSBE and counterpart members (CP) to support the agreement for finalize. However, the statutory authority could not decide without the technical cooperation comments from VCSBE and counterpart members (CP).

Mr. Khamphay and Khamphoune mentioned on behalf of counterpart members (CP), they were only one committee that contributes their technical cooperation comments to the statutory authority to consider about planning and design after that they would send to approve and have a meeting to announce to public and start the construction.

3. Ms. Miyakawa (JE) had presented recommendation for public transport facility planning and design as < DRAFT > version
VCSBE and counterpart members (CP) are requested to go through the draft of recommendation for public transport facility planning and design as guideline as DRAFT, which prepared by JICA Expert, and this would be assigned as their tasks for improving their ideas of public transport facility planning and design.

Mr. Khamphoune mentioned that he just joined a meeting yesterday, the vice Mayor of Vientiane Capital had asked him about a project working progress.

4. Urgent clarification required for CBS development project and involvement for processing of existing CBS as the following question in slideshow of CBS with the work breakdown for CBS planning and design procedure in title please see (work breakdown chart as per attached).

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

VCSBE and counterpart members (CP) were agreed to go through the tasks that had been given by the JICA experts in order to decide and expect the time line that VCSBE and counterpart members (CP) are requested a support from the JICA experts for next trip.

Ms. Miyakawa (JE) would request VCSBE and counterpart members (CP) to plan how much they would need a support from her to assist about tasks in order for her to plan and require an authorization from JICA for her next trip duration.

5. Next meeting

Mr. Khamphoune proposed to invite the director of MPWT, DoT VCO, and the Mayor of Vientiane Capital to involve the meeting with JICA experts for the next meeting.

- The meeting was adjourned at 16:05 pm.

Capacity Enhancement for
Public Transport Facility Planning and Design

1. What is Public Transport Facility?

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
1

Capacity Enhancement for
Public Transport Facility Planning and Design

Public Transport Facility for bus

- Bus station
- Terminal
- Depot / Garage
- Bus lane
- Bus stops
- And more...

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
2

Capacity Enhancement for
Public Transport Facility Planning and Design

2. What is GOOD Public transport Facility?

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
3

Capacity Enhancement for
Public Transport Facility Planning and Design

Designed for all

Integrated

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
4

Capacity Enhancement for
Public Transport Facility Planning and Design

Designed for All



Bus Operator



Bus passenger



Pedestrian



Sonteo user



Motorcyclist



Mobility impaired



Mother with baby



Kiosk owner



Traveler

And all others....

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
5

Capacity Enhancement for
Public Transport Facility Planning and Design

Facility to designed for all user requirements

Common requirement for all users are:

SAFE

LEGIBLE

CONVINIENT

SECURE

ACCESSIBLE

COMFORTABLE / PLEASANT

The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan
6

Capacity Enhancement for
Public Transport Facility Planning and Design

Requirements for pedestrian

Requirements	Planning and design consideration
Safe	Footpath, Protection from accident , etc.
Accessible	Good surface, provision for mobility impaired, etc.
Convenient	Directness to destination, good linking and connection , provision of information, etc.
Secure	Lighting, Surveillance, Shade from sun and rain, etc.
Legible	Way finding signage, Uniformity, etc.
Comfortable	Seating area, Landscaping, Good air, Cleanliness, etc.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
7

Capacity Enhancement for
Public Transport Facility Planning and Design

Integrated

- **Bus system itself** : Fare system, Time table, Transferring etc.
- **Other public transport mode** : Pedestrian, Cyclist, Para-transit, etc.
- **Site and surrounding capacity**: Traffic management, Land use, Landscape, etc.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
8

Capacity Enhancement for
Public Transport Facility Planning and Design

Integrated within Bus system itself

Facility to be organize to provide **Seamless interconnection** within bus service

Bus Service	Planning and design consideration
Type of bus:	Requirement for bus bay, etc.
Time table	Requirement for bus bay / lighting , etc.
Fare / ticket system	queuing to buy ticket at desk / ICT Ticket, etc.
Transferring	Connection and linking space / facility, etc.
Volume of expected passenger	Waiting area space, amenities, etc.
Inclusive mobility	Facility for Inclusive mobility, etc.
Passenger pick up policy	Bus stop location, Bus stop amenities, etc.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
9

Capacity Enhancement for
Public Transport Facility Planning and Design

Integrated to other public transport network

Facility to be also organize to **convenient transfer** and **co-existence** to other public transport network.

Public transport mode	Planning and design consideration
Pedestrian	Footpath, crossing, way findings, public open space, etc.
Cyclist	Cycle lane, parking lots, cycle routes, etc.
Sonteo	Drop off and pick up, Parking space, etc.
TukTuk	Drop off and pick up, Parking space, etc.
Taxi	Drop off and pick up, Parking space, etc.
Buses	Transfer facility, route map, etc.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
10

Capacity Enhancement for
Public Transport Facility Planning and Design

Integrated to Site and Surrounding Capacity Traffic Demand

Proposed public transport is integrated into existing and expected transport demand on site and surrounding.

Management policy	Planning and design consideration
Bus priority	Bus priority lane, etc.
Private vehicle restriction	Restriction of access by lane, time, zone, etc.
Parking management	Charge of parking fee, restrict parking space , etc.
Para transit intergradation	Parking space, Drop off / Pick up, etc.
Pedestrian / Cyclist priority	More space for pedestrian , Crossing points vehicle speed hump, Bicycle Parking space, etc.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
11

Capacity Enhancement for
Public Transport Facility Planning and Design

Integrated to Site and Surrounding Capacity Land Use

Public transport facility especially Station, Terminal and Stops, affect greatly to local land use pattern. In other words, Location and corridor choice require great attention.

Impact on local land use	Planning and design consideration
Increase destination within walking distance	<ul style="list-style-type: none"> • Mix land use • Walkability • Site design • Connectivity • Drop off and parking area
Increase Livability	
Increase Economic activity	
Increase Property / Land value	

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
12

3. What is Public transport Facility Planning & Design

Public Transport Facility Planning & Design
is
To organize physical environments resolving conflicts
so that
all requirements to work on site and surrounding
without negative impacts.

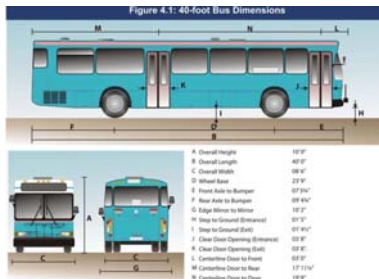
Organize physical environments

with technical requirements such as

- Space requirement
- Structure
- Function flow
- Materials
- Distance
- Amenities
- Gradient / Height
- Furniture

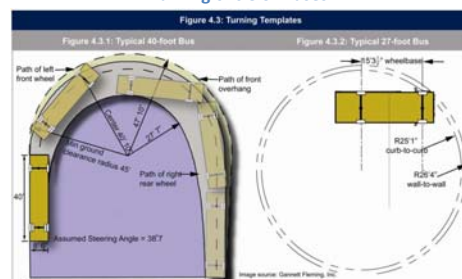
Example 1. Physical requirements for Bus

Dimension of Bus



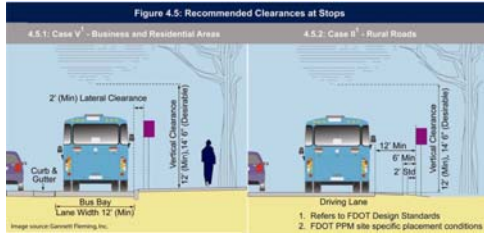
Source : Florida Department of Transportation District one and seven, Transit facility Handbook Oct 2007

Turning circle of Buses



Source : Florida Department of Transportation District one and seven, Transit facility Handbook Oct 2007

Design Clearance for Bus



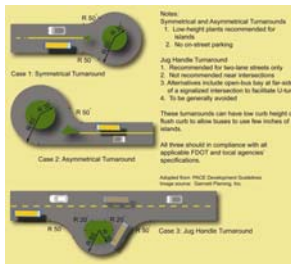
Source : Florida Department of Transportation District one and seven, Transit facility Handbook Oct 2007
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
19

Design Bus Stop kerb



Source : Accessible bus stop design guidance, Bus Priority Team technical advice note BP1/06, January 2006, TfL
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
20

Design Bus turnaround

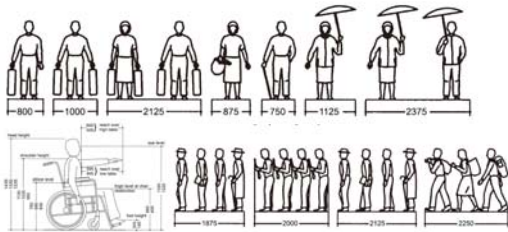


Source : Florida Department of Transportation District one and seven, Transit facility Handbook Oct 2007
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
21

Example 2. Physical requirements for people

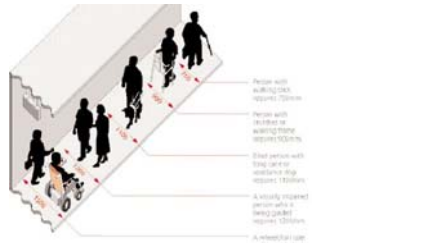
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
22

Dimension / Space required for People



Source : Handbook: Planning and Design Data: David Littlefield (2009)
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
23

Design Pedestrian Footpath



Source : Inclusive mobility guideline UK(2005)
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan
24

4. Issue of proposed CBS

CBS Planning and Design

Insufficient consideration for "Design for All"

Insufficient consideration for "Integration"

Insufficient in organization for "Physical Environments"

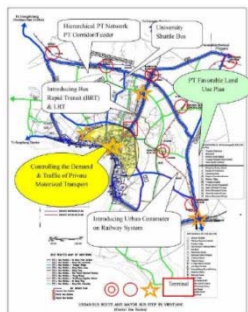
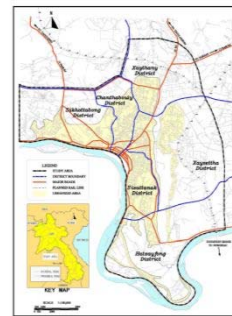
"Integrated Land use"

Significance of existing CBS to the site and surrounding

as

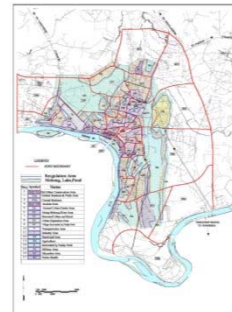
"Transport Hub for Vientiane city"

"Nucleus of the City"



Public transport Network

Source: The study of Master plan on Comprehensive urban transport in Vientiane (2008)



Land use

Source: The Project for Urban Development Master Plan Study in Vientiane Capital (2010)



Access to CBS



Arriving on foot



Arriving by cart



Arriving by Sonteo



Arriving by motorbike



Arriving by Car



Buying Tickets



Buying food



Buying Lotto



Wait bus



Leave luggage



Bus parked



Get on bus



On a bus



Jam at exit



Travel on Congested road



Transfer to Sonteo



Transfer to motor cycle



Transfer to car



Public Transport Facility Planning and Design

No.3

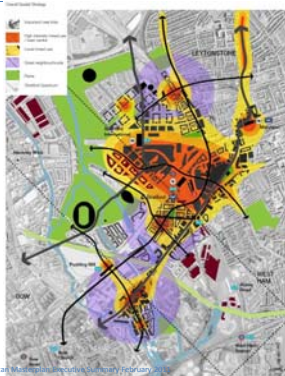
Case study in UK

1. Example of Good development in UK

Stratford City



Stratford City Bus Station



Capacity Enhancement for
Public Transport Facility Planning and Design

Where to catch your bus in Stratford from Tuesday 13 September 2011

Bus route	Towards	Bus stops
25	Bford	Stratford City
69	Quford Cross	Stratford City
86	Canning Town	Stratford City
97	Chingford	Stratford City
104	Manor Park	Stratford City
108	Lemantham	Stratford City
158	Chingford Heath	Stratford City
238	Barking	Stratford City
241	Princes Regent	Stratford City
257	Walthamstow	Stratford City
262	East Section	Stratford City
276	Newham General Hospital	Stratford City
308	Clapton Park	Stratford City
339	Walthamstow	Stratford City
423	Clapton	Stratford City
473	North Woodlark	Stratford City
548	Cromwell Road	Stratford City
740	Hanwell	Stratford City
742	Quford Cross	Stratford City
743	Hanwell	Stratford City

Coaches
National Express coaches to Cambridge and East Anglia will stop at temporary stop 1 on Great Eastern Road.
Route 742 to Bishop's Stratford will stop at temporary stop 2 on Great Eastern Road.
National Express A9 to Stratford Airport will continue to stop at 3.

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 7

Capacity Enhancement for
Public Transport Facility Planning and Design

Stratford City Bus Station

Site setting:
The area has been under going major regeneration on derelict land as stage for Olympic site , as well as 2 shopping centers , schools, hotels, parks, health center and residential area, supported by existing " Stratford Regional Station", one of busiest transport interchanges in London.

***** Interchange:**

Station: Due to the surrounding development, it has been assessed that existing station also have to be invested to redevelop to accommodate a growth of demand.

Stakeholders: Stratford development partnership, London Borough of Newham, Greater London Authority, Network Rail, Transport for London, Central Government

The Stratford Station Program Board; Established to enable the provision of joint governance of the transport scheme and overall program management of the developments at Stratford

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 8

Capacity Enhancement for
Public Transport Facility Planning and Design

Stratford City Bus Station

The Scheme : The Stratford Bus Station has an iconic design and strong local landmark. Conversion of existing rail lines, connecting international service, and integrating a new shopping center. Contribution by shopping Centre developer : £150 million investment for public transport / Barrier free access through the site.

Improvement:

- Integrated bus station
- New ticket hall integrated to shopping center
- New public footbridge over the railway connecting new development and city centre
- And small measure including lift, cycle facility, integrated signage and wayfaring, de-cluttering.

Bus service: 16 route from the station

Intermodal Transfer:
Domestic : High speed rail, Light Railway, Underground, National rail, Bike, Private cars, Bicycle
International: Eurostar is on discussion

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 9

Capacity Enhancement for
Public Transport Facility Planning and Design

Source : Flickers
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 10

Capacity Enhancement for
Public Transport Facility Planning and Design

Source - Interchange Best Practice Guidelines 2009, TfL
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 11

Capacity Enhancement for
Public Transport Facility Planning and Design

Source : Flickers
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 12

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

13

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

14

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

15

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

16

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

17

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

18

Capacity Enhancement for
Public Transport Facility Planning and Design

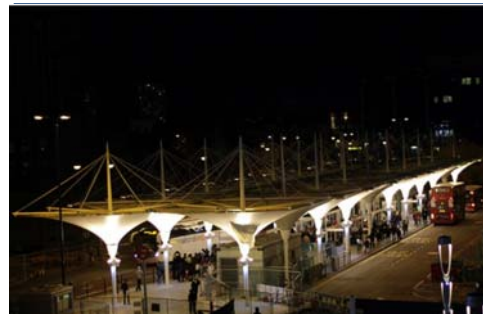


The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

19

Capacity Enhancement for
Public Transport Facility Planning and Design

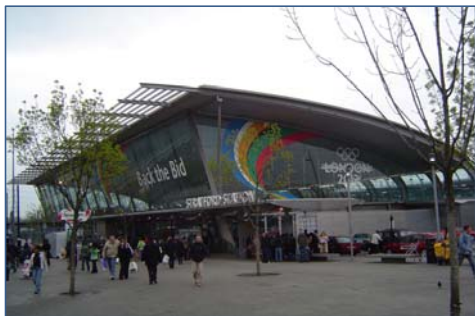


The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

20

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

21

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Interchange Best Practice Guidelines 2009, TfL

22

Capacity Enhancement for
Public Transport Facility Planning and Design



Source : Flickr

23

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

24

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

25

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

26

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

27

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

28

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

29

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Ventiane capital state bus enterprise
May 2012
Public transport facility plan

Source : Flickr

30

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Flickers

31

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Flickers

32

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Flickers

33

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Flickers

34

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Westfield Stratford, in sight, May 2011 | Issue 8

35

Capacity Enhancement for
Public Transport Facility Planning and Design




The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan

Source: -Flickers

36

Capacity Enhancement for
Public Transport Facility Planning and Design



The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 37

Source: TfL Product Design Guidelines, 2006, TfL

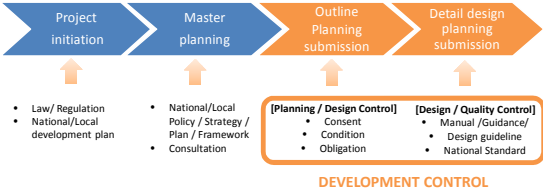
Capacity Enhancement for
Public Transport Facility Planning and Design

2. How it can happen

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 38

Capacity Enhancement for
Public Transport Facility Planning and Design

Control of Project



- Project initiation**
 - Law / Regulation
 - National/Local development plan
- Master planning**
 - National/Local Policy / Strategy / Plan / Framework
 - Consultation
- Outline Planning submission**
 - Consent
 - Condition
 - Obligation
- Detail design planning submission**
 - Manual /Guidance/ Design guideline
 - National Standard


DEVELOPMENT CONTROL

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 39

Source : Bus station signage and display guideline, TfL, 2007

Capacity Enhancement for
Public Transport Facility Planning and Design

Control of Project



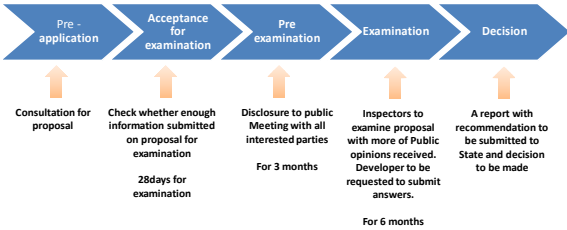
- Implementation**
 - [Risk / Impact Control] Inspection
- Completion**
 - [Quality Control] Issue of certificate
- Maintenance**
 - [Operation / Quality Control] Inspection

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 40

Source : Bus station signage and display guideline, TfL, 2007

Capacity Enhancement for
Public Transport Facility Planning and Design

Planning Process



- Pre - application**
 - Consultation for proposal
- Acceptance for examination**
 - Check whether enough information submitted on proposal for examination
 - 28days for examination
- Pre examination**
 - Disclosure to public Meeting with all interested parties
 - For 3 months
- Examination**
 - Inspectors to examine proposal with more of Public opinions received. Developer to be requested to submit answers.
 - For 6 months
- Decision**
 - A report with recommendation to be submitted to State and decision to be made

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 41

Source : Bus station signage and display guideline, TfL, 2007

Capacity Enhancement for
Public Transport Facility Planning and Design

3. Design and Quality control

Best Practice Guideline by TfL

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 42

Capacity Enhancement for
Public Transport Facility Planning and Design

Interchange management

- Cooperation and Coordination between those organization involved in Designing, implementing and managing facilities aiming to provide improved level of service for passenger.

↓

Interchange facility management agreement

- Identification of stakeholders, role and responsibilities, accountability

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 49

Capacity Enhancement for
Public Transport Facility Planning and Design

Interchange facility management agreement

- Agreement of interchange zone spatial management
- Arrangement for cooperation on interchange facility staffing
- Emergency and service disruption procedure
- Information ticketing and advertising
- Cleaning and maintenance
- Temporary structure
- Hours of operation and access
- Passenger facility provision

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 50

Capacity Enhancement for
Public Transport Facility Planning and Design

3. Design Guideline

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 51

Capacity Enhancement for
Public Transport Facility Planning and Design

Guideline for Bus stops

Figure 14.1 : Rigid Bus

Figure 14.2 : Articulated Bus

Source : Accessible bus stop design guidance, TfL, 2006
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 52

Capacity Enhancement for
Public Transport Facility Planning and Design

Guideline for Signage

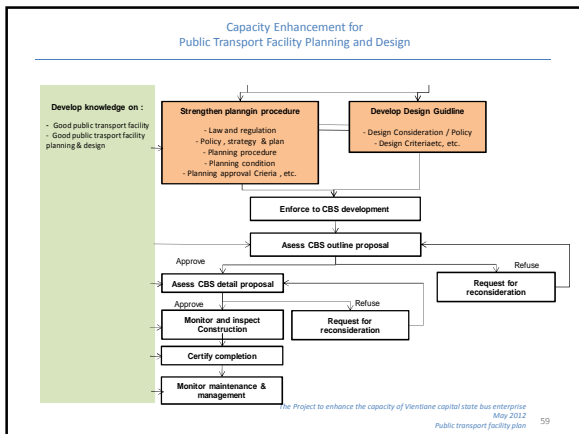
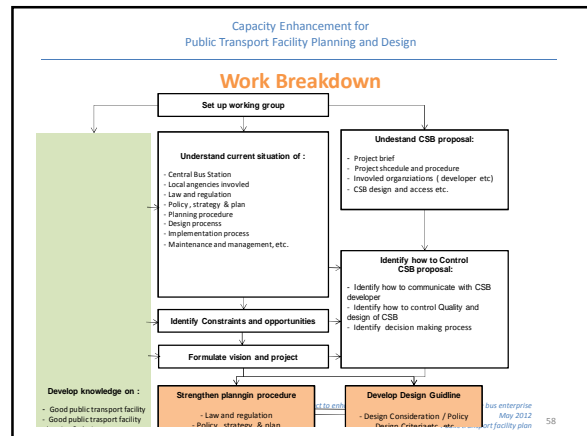
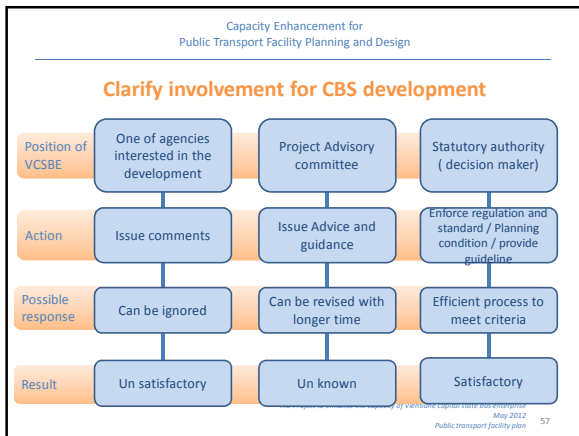
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 53

Source : Bus station signage and display guideline, TfL, 2007

Capacity Enhancement for
Public Transport Facility Planning and Design

Guideline for Disability

Source : Inclusive Mobility Guideline, DfT, 2004
The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 54



Capacity Enhancement for
Public Transport Facility Planning and Design

	VCSBE	Developer
5 May	Submit comments	
6 June	Internal agreement on actions to CBS development	Revise proposal
7 July	Consultation on coordination & decision making process Prepare for guidelines	Prepare info. requested (EIA)
8 August	Provide guidelines	Submit info. requested
9 September	Examine proposal	Re-submit proposal
10 October	Decision	Consultation on proposal

The Project to enhance the capacity of Vientiane capital state bus enterprise
May 2012
Public transport facility plan 60

Regular Meeting

Time/Date: Tuesday, 28 Aug, 2012, 14:00 -

Place: VCSBE Meeting Room

Agenda

1. Work and Assignment schedule

2. Bus Mechanics
 - Repairing Schedule

3. Corporate Management / Accounting
 - The progress of Capacity Assessment
 - The mechanism of the fare price and profit
 - 2nd Management & Finance Work Shop
 - The progress of the opinion and the recommendation for the subsidy policy

4. Public Transport Facility Planning
 - Work Flow
 - Identification of Role and Responsibility of Authorities

5. Others

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

Meeting Records

Time/Date: Tuesday, 28 August, 2012, 14:00 - 15:30
 Place: The Project to enhance the capacity of VCSBE Office
 Objectives: Discussion
 Participants:

VCSBE	Mr. Khamphoune TEMERATH, Director Mr. Bounpone PHONGMANY, Deputy Director Mr. Vanly CHANCHALERN, Deputy Director Mr. Khamphay
DPWT/VC	
DoT/MPWT	
JICA Project Team	Mr. Murata Minoru, Mechanics Mr. Shimegi Natsuki, Corporate Management/ Accounting Ms. Akiko Miyakawa, Public Transport Facility

	Content	Action
Mr. Shimegi	Informed the topic of meeting which are: 1. Work and Assignment Schedule 2. Bus Mechanics 3. Corporate Management/ Accounting 3. Public Transport Facility Planning	
Mr. Murata	Informed for body deflects matrix and schedule checking and fixing plan of 42 buses (see attach)	
Mr. Shimegi	Informed about already provided 10 questionnaire (capacity assessment) to VCSBE staff. Introduced about The mechanism of the fare price and profit (see attach). Asking VCSBE for 2nd Management & Finance Work Shop. Report about the progress of the opinion and the recommendation for the subsidy policy	
Mr. Khamphoune	2nd Management & Finance Work Shop will be held On 04 September 2012. Explained about procedures approved for bus fare:	

The Project to Enhance the Capacity of Vientiane Capital State Bus Enterprise

	Content	Action
	- Town bus route: VCSBE submit to DPWT - Intercity province route: VCSBE submit to DPWT, and then DPWT submit to DOT.	
Ms. Miyakawa	Mentioned about Public Transport Facility Planning such as: Work Flow (see attach). Identification of Role and Responsibility of Authorities (See attach).	

- The meeting was adjourned at 15:30 pm.

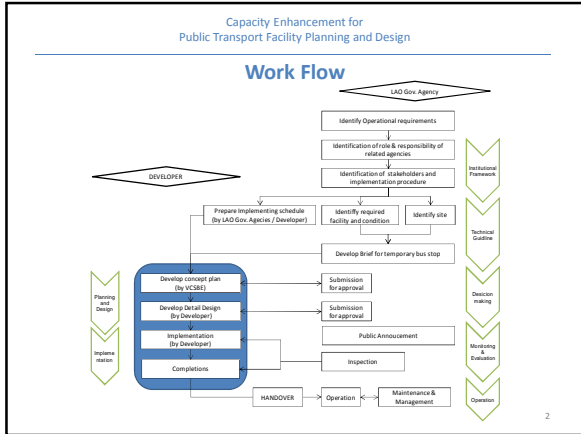
Capacity Enhancement for
Public Transport Facility Planning and Design

Public Transport Facility Planning and Design

No.4
(regular meeting Aug 28th 2012)

**Temporary Bus Stop
During construction of CBS**

1



Capacity Enhancement for
Public Transport Facility Planning and Design

Stage 1 : Review Institutional framework

1. Identify Role and Responsibility of Agency
2. Identify Law, Regulation and Standard applied
3. Identify Design and Implementation procedure
 - Stakeholders involved
 - Required approval, negotiation and permission
4. Prepare Implementation Schedule

3

Capacity Enhancement for
Public Transport Facility Planning and Design

Stage 2 : Facility Planning and Design

1. Develop Principle Approach
2. Identify Site location
3. Identify Facility for Bus operation & requirements
4. Identify Facility for passenger & requirements
5. Prepare Guideline

4

Capacity Enhancement for
Public Transport Facility Planning and Design

Stage 3 : Design and Implementation

1. Develop Concept Design
2. Develop Detail Design
3. Implement

Stage 4 : Operation

1. Operate Bus service
2. Manage and Maintain Temporary Bus Stop

5

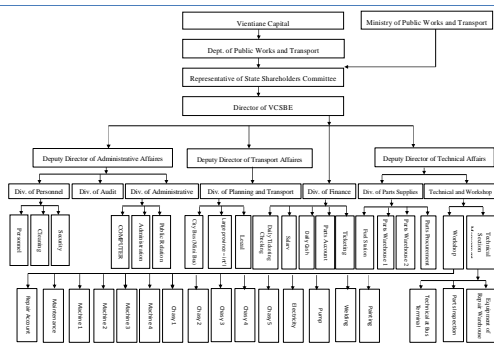
Capacity Enhancement for

Items	August		September		October		November		December		January	
	v1	v2	v1	v2	v1	v2	v1	v2	v1	v2	v1	v2
Commencement of New CBS Construction												
Preparation of institutional framework												
Identify Role and responsibility of agencies												
Identify Stakeholders												
List up required permission for project												
Application / negotiation for required approval for project												
Preparation of technical guideline												
Collection of information and staff requirements												
Consensus building for requirements												
Initial discussion on requirement of TBS												
Preparation of Concept plan												
Preparation of Concept plan by Consultant												
Consultation with Stakeholders												
Approval from Authorities												
Preparation of Detail Design												
Preparation of Details by Developer												
Consultation with Stakeholders												
Approval from Authority												
Announcement to Public and news and notices												
Construction												
Monitoring												
Inspection												
Completion												
Take over												
Operation												
Maintenance and Management												

Role and Responsibility of Authority

Activity	Implementing Agencies	Responsible Agency	Supervision
Project management for development of TBS Administration related to TBS: (including coordination, application for approval, etc.)	Developer	DPWT	VC / MPWT
TBS Planning and Design: (Including Site Survey, preparation of drawing, Spec)	Developer	DPWT	VC / MPWT
Technical assistance of TBS (including provision of guidance, technical info. required for TBS)	VCSBE	DPWT	VC / MPWT
Technical assistance of other works such as road, pavement (including provision of guidance, technical info)	DPWT	VC	MPWT
Construction works related to TBS if required	Developer	DPWT	VC / MPWT
Operation of TBS	VCSBE	DPWT	VC / MPWT
Maintenance of TBS	Developer	VCSBE	DPWT
Management of TBS	VCSBE	DPWT	VC / MPWT
Funding for TBS	Developer	DPWT	VC / MPWT
Traffic Management during construction and operation of TBS (including control and regulation of traffic)	VCSBE / Traffic Police	DPWT	VC / MPWT

7



8

Stakeholder to be involved

Stakeholders	Interest/ Concerns
VCSBE	Operation of Bus Service with same standard as existing CBS. Maintain same no of bus user as existing
Developer	Interruption to the development work
DPWT	Impact to transport
Vientiane Capital	Impact to public
Other Gov. Authorities	
Bus service User	Accessible, Safe, Convenient to use bus facility
Land owner of proposed TBS	Negative impact
Occupier of the TBS site and surrounding	Negative impact to everyday life, business etc.
Land owner and occupier of nearby TBS	Negative impact to everyday life, business etc.
Para Transit owner	Negative impact to their business
Public	Safety to move around, Negative impact to their everyday activity

9

Activity requires Permission

Item	Initiated by	Authority	Requirement	Required documents	Required Duration
1. Use of proposed TBS site / Road	VCSBE	DPWT	Official approval	Letter	Unknown (Applied 3, 2012 but not approved yet)
2. Relocation of existing Sonteo on proposed site					
3. Proposed Works on Road					
4. Notice to public and related agencies					
5. Change of traffic flow					
6. Restriction of existing parking, access of private vehicles					
7. Installation of Pedestrian crossing					
8. Installation of Street furniture such as bench, shelter, way findings and signs, lighting					
9. Connection and installation of utility services					

10

Keisei Bus Training

No	Date	Time	Description
1	30 Oct 2013	9:00- 10:30	Roll call and Bus operation management By Mr. Suzuki
		13:30- 15:00	Shuttle bus operation By Mr. Aizawa
		15:00- 16:30	Bus fare setting By Mr. Aizawa
2	31 Oct 2013	14:00 – 15:00	C/P Meeting
3	01 Nov 2013	14:00 – 16:00	Advicee for Executive Class

Registration

Meeting Topic: Shuttle bus operation By Mr. Aizawa ,Bus fare setting By Mr. Aizawa

Place: VCSBE Meeting Room

Date: 30 October 2013

Time: 13:30 - 16:30

ສາຍ No.	ຊື່ ແລະ ນາມສຸກ Name & Surname	ຕຳແໜ່ງ Position	ອົງການ Organization	ເບີໂທລະສັບ Telephone number	ທີ່ຢູ່ Email Address	ສັນຍາ Signature
1	Mr. Aizawa	Director	VCSBE	55606370		[Signature]
2	Mr. Aizawa	Director	VCSBE	55503987		[Signature]
3	Mr. Aizawa	Director	VCSBE	55502256		[Signature]
4	Mr. Aizawa	Director	VCSBE	42007056		[Signature]
5	Mr. Aizawa	Director	VCSBE	55614405		[Signature]
6	Mr. Aizawa	Director	VCSBE	99494131		[Signature]
7	Mr. Aizawa	Director	VCSBE	55514112		[Signature]
8	Mr. Aizawa	Director	VCSBE	54300030		[Signature]
9	Mr. Aizawa	Director	VCSBE	55655236		[Signature]
10	Mr. Aizawa	Director	VCSBE	55644122		[Signature]
11	Mr. Aizawa	Director	VCSBE	5566512		[Signature]
12	Mr. Aizawa	Director	VCSBE	55510187		[Signature]

Registration

Meeting Topic: Shuttle bus operation By Mr. Aizawa ,Bus fare setting By Mr. Aizawa

Place: VCSBE Meeting Room

Date: 30 October 2013

Time: 13:30 - 16:30

ສາຍ No.	ຊື່ ແລະ ນາມສຸກ Name & Surname	ຕຳແໜ່ງ Position	ອົງການ Organization	ເບີໂທລະສັບ Telephone number	ທີ່ຢູ່ Email Address	ສັນຍາ Signature
13	Mr. Aizawa	Director	VCSBE	5540640		[Signature]
14	Mr. Aizawa	Director	VCSBE	44000450		[Signature]
15	Mr. Aizawa	Director	VCSBE	55528200		[Signature]
16	Mr. Aizawa	Director	VCSBE	2820350		[Signature]
17	Mr. Aizawa	Director	VCSBE			[Signature]
18	Mr. Aizawa	Director	VCSBE			[Signature]
19	Mr. Aizawa	Director	VCSBE	2377398		[Signature]
20	Ms. MISHIMA	KEI	Keisei Bus			[Signature]
21	Mr. AIZAWA	Keisei	Keisei Bus			[Signature]
22	Mr. AIZAWA	Keisei	Keisei Bus			[Signature]
23	Mr. AIZAWA	Keisei	Keisei Bus			[Signature]
24	Mr. I. Shibashi	Keisei	Keisei Bus			[Signature]

Registration

Meeting Topic: Roll call and Bus operation management By Mr. Suzuki

Place: VCSBE Meeting Room

Date: 30 October 2013

Time: 09:00 - 10:30

ສາຍ No.	ຊື່ ແລະ ນາມສຸກ Name & Surname	ຕຳແໜ່ງ Position	ອົງການ Organization	ເບີໂທລະສັບ Telephone number	ທີ່ຢູ່ Email Address	ສັນຍາ Signature
1	Mr. Suzuki	Director	VCSBE	5551745		[Signature]
2	Mr. Suzuki	Director	VCSBE	55606370		[Signature]
3	Mr. Suzuki	Director	VCSBE	55502256		[Signature]
4	Mr. Suzuki	Director	VCSBE	42007056		[Signature]
5	Mr. Suzuki	Director	VCSBE	55614405		[Signature]
6	Mr. Suzuki	Director	VCSBE	99494131		[Signature]
7	Mr. Suzuki	Director	VCSBE	55514112		[Signature]
8	Mr. Suzuki	Director	VCSBE	54300030		[Signature]
9	Mr. Suzuki	Director	VCSBE	55655236		[Signature]
10	Mr. Suzuki	Director	VCSBE	55644122		[Signature]
11	Mr. Suzuki	Director	VCSBE	5566512		[Signature]
12	Mr. Suzuki	Director	VCSBE	55510187		[Signature]

Registration

Meeting Topic: Roll call and Bus operation management By Mr. Suzuki

Place: VCSBE Meeting Room

Date: 30 October 2013

Time: 09:00 - 10:30

ສາຍ No.	ຊື່ ແລະ ນາມສຸກ Name & Surname	ຕຳແໜ່ງ Position	ອົງການ Organization	ເບີໂທລະສັບ Telephone number	ທີ່ຢູ່ Email Address	ສັນຍາ Signature
13	Mr. Suzuki	Director	VCSBE	54002402		[Signature]
14	Mr. Suzuki	Director	VCSBE	54300030		[Signature]
15	Mr. Suzuki	Director	VCSBE	2377398		[Signature]
16	Mr. Suzuki	Director	VCSBE	55444374		[Signature]
17	Mr. Suzuki	Director	VCSBE	5441305		[Signature]
18	Mr. Suzuki	Director	VCSBE	55510187		[Signature]
19	Ms. MISHIMA	KEI	Keisei Bus			[Signature]
20	Mr. ISHIBASHI	Keisei	Keisei Bus			[Signature]
21	Mr. SUZUKI	Keisei	Keisei Bus			[Signature]
22	Mr. AIZAWA	Keisei	Keisei Bus			[Signature]
23	Mr. SHIBASHI	Keisei	Keisei Bus			[Signature]
24	Mr. SHIBASHI	Keisei	Keisei Bus			[Signature]

Roll Call

(1) Necessity of roll call

The purpose of roll call is conducted as one of the means to secure bus driver and passenger's security.

In case of road transport filled business comparing to other business fields, drivers are not working under the observer's direction during their duty, therefore, the roll call before and after their duty is quite important to check, information sharing and guidance from between bus operation manager and bus driver. Particularly, bus operation accidents are directly affect people's life and their assets. To avoid vicious impact by bus traffic accident to people, safe driving guidance from bus operation manager to bus driver is necessary to conduct through a face to face roll call.

The contents of a roll call are;

- Road information: ex; road construction, accident and so on.
- Weather information
- Health check by eye sight and declaration
- Alcohol check by alcohol checker
- Time check: driver's watch and bus office clock time
- Other necessary information for bus operation.

(2) Objective of roll call

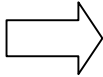
There are two objectives for roll call. One is direction for safe driving, the other is confirmation for safety drive.

(3) Writing up check list and custody of roll call data

A person in charge of a roll call must keep and organize the roll call check list data. The data is not only for data of roll call but also clarify the roll call person in charge, and need to be transfer the data when a new person in charge was selected. Therefore, the check list date should be clearly, precisely and simply descript the summary of the roll call, and keep the data for one year.

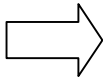
Roll Call

Purpose

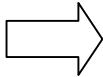


- To ensure safety driving
- To confirm safety environment for people and car during bus operation.
- Give direction for safety driving

Place and time to conduct



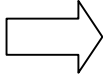
When: Before and after bus operation



Place for roll call

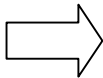
*For the adequate roll call environment, need to prepare process of roll call, today's overriding item, message, other necessary information on board, standard time clock, necessary documents.

Method



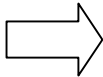
- ① **Face to face roll call:** Direct communication with driver.
- ② **Telephone roll call:** In case of difficulty of face to face roll call at the beginning and ending of bus operation.

Conduct person



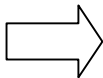
Must be done by bus operation manager (Call assistant if necessary)

Contents



Direction and confirmation for safe driving

Remind



- ① Keep good costume and posture condition.
- ② **Attend with purpose**
- ③ Clear and easy direction and attention
- ④ **Be fare to every driver.**

Direction and confirmation during roll call

Item		Contents
Before operation	Direction	<p>(a) Necessary direction for safe driving.</p> <p>Road condition such as traffic congestion, construction, traffic control information and weather condition which might affect bus operation need to be informed to driver.</p> <p>☞ This information is sometime quoted by the day before end of operation call. In addition, latest information update is necessary such as weather and traffic situation.</p> <p>(b) Need to fully understand the direction, attention and information for safety driving to protect passenger and their luggage.</p> <p>(c) Very important to mention driver's driving habit to prevent traffic accident.</p>
	Confirmation	<p>(a) Confirm the bus vehicle condition for safe driving.</p> <p>(b) Confirm and receive report from the driver such as about health condition, alcohol check result, and so on to make sure the driver is healthy enough to operate the bus.</p> <p>(c) Need to confirm and inspect the driver even if the driver reports "no problem" to the manager.</p> <p>☞ Inspect the driver's walking posture, uniform, face, moth smell, eye condition.</p> <p>(d) Confirm if the driver wearing the uniform properly.</p> <p>(e) Confirm belongings such as driving license, necessary documents and so on.</p>
After operation	Confirmation	<p>(a) Firstly, confirm if the driver did safe driving all day long.</p> <p>If the bus has problem, the driver need to report to bus vehicle manager for adequate repair.</p> <p>Secondly, for the next day safe driving, driver report the latest road condition to the manager.</p> <p>☞ Location of road construction, road congestion, road condition and so on.</p> <p>(b) Report other necessary information for the next day bus operation. (Ex, passenger and their luggage claim)</p> <p>(c) ☞ Manager need to communicate with bus driver with respect.</p>

Contents of Roll Call

1. Before bus operation

Driver: Good morning.

Manager: Good morning.

Driver: My name is ○○. I supposed to operate bus route ○○ bus number ○○ today. I would like to ask you to start roll call. Please confirm my driving license, driver name plate for display inside of bus and alcohol check result.

(With submission of driving license, driver name plate for display inside of bus and alcohol check result receipt)

Bus number ○○ there was no problem at daily bus vehicle inspection (With submission of check list of daily bus vehicle inspection).

Manager: Ok. (Confirmation of submitted driving license expire date and other necessary parts of the license, driver name plate for display inside of bus, name and result of the alcohol checker result receipt). No problem.

Manager: How is your health condition?(Eye sight conformation by looking driver's face, eyes, uniform, etc)

*In case of health manager, the manager need to check driver's condition, kind of medicine which the driver is taking, attend hospital or not.

In terms of medicine, need to confirm whether the medicine cause sleepiness or not. If the driver is attending doctor, need to be reported to the manager.

Driver: There is no problem on my health.

* The case of health manager, driver needs to report health condition, medicine information, attendance of hospital.

Manager: Ok. Today's your duty is route ○○ time table is ○○ isn't it?

Driver: That is right.

Manager : As you can see on panel, there is a road construction between ○○to○○, so please pay attention to safe driving. In addition, need to pay attention at location ○○ to pedestrian and bicycle. They might suddenly rush out into the street. Try to preventive driving to avoid traffic accident between bus, and pedestrian and bicycle.

Driver: Ok.

Manager: As additional information, accidents inside of bus vehicle during operation are frequently occurred these days. Please pay attention to customers when you start and stop driving and turn to left and right. In addition, please ask customers to pay attention using microphone in bus.

Driver : Ok..I will carefully drive.

Manager: Please repeat today's overriding item "Avoid inside bus accident by making use of microphone announce"

Driver : "Avoid inside bus accident by making use of microphone announce". Ok!

Manager: Please keeps safety driving all day long.(Handed bus operation necessary belongings from the manager to the driver)

Driver : I will start the bus operation from now.

2. After bus operation

Driver: After bus vehicle inspection and before the roll call, the driver needs to have alcohol examination by alcohol checker.

Firstly, Name of operated bus route and bus number, name of the driver are announced by the driver to the bus operation manager. Then the roll call starts.

(Submission of belongings for bus operation, work diary, receipt)

Manager: (After the confirmation of belongings for bus operation, work diary, receipt)

Thank you for your diligent work today. How was bus vehicle and road condition?

Driver: There was no accident and problem.

Manager: How was bus operation situation today? There was a road construction between ○○ to ○○. Was bus delayed due to the road construction?

Driver: No. There was no delay of bus operation.

Manager: Ok. Everything's are confirmed about today's bus operation. Then move to tomorrow's operation confirmation.

Driver: Yes, tomorrow's operation start at ○:○○.

Manager: Ok. Have sleep well for tomorrow's duty. Thank you for your today's diligent work.

Driver: Thank you.


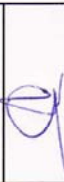

Registration

Meeting Topic: Advice for VCSBE

Place: VCSBE Meeting Room

Date: 01 November 2013

Time: 15:00 - 16:30

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍຊື່ Signature
1	MR. Khampboune	Director	VCSBE	55512183		
2	Mr. Vanly	Dep.		55606390		
3	Mr. Bouapha Phany			55514112		
4	Mr. Aizawa		Keisei Bus			
5	Mr. Isibashi		Ditto			
6	Mr. Suzuki		Ditto			
7	Ms. Mishima		KEI			
8	Mr. Murata					
9						
10						
11						
12						

THE JICA PROJECT TO ENHANCE THE CAPACITY OF VIENTIANE CAPITAL
STATE BUS ENTERPRISE

Advice for VCSBE

Keisei Bus

1 November 2013

Mr.Aizawa, Ishibashi, Suzuki

1. Bus use traffic safety on 26 October

The bus use safety training on 26 October made remarkable success. The bus use safety training is effective for traffic safety public awareness and bus use promotion. Keisei bus hopes VCSBE to use a donated doll for bus traffic safety training demonstration to sustain bus use traffic safety training and for bus use promotion events.

The doll boy name is Ken, we do hope this Ken will play significant role to enhance bus traffic safety and bus use promotion.

2. Items suggested in April 2012 by Keisei Bus

- ① Safe operation of new 42 donated buses from Japan
- ② Intensive use of new 42 donated buses from Japan in limited area
- ③ Shuttle bus operation at route 29 (CBS-Dngdok)
- ④ Improvement of VCSBE management

Among these, Keisei Bus confirmed ① and ② are almost observed. The buses are keeping clean. We do hope VCSBE will maintain the current condition to use bus in long term.

About ③, unfortunately we could not see the progress. We strongly suggest shuttle bus introduction. Keisei bus suggest shuttle bus introduction to Route 29 (CBS-Dongdok), however, considering the current situation, we newly suggest Route 14 (CBS-Friendship Bridge) to be conducted shuttle bus. The reason why Keisei Bus recommends Route 14 is, Route 14 is the highest number of bus vehicles and its operation and fare setting, therefore it is highly expected to obtain high impact.

For shuttle bus implementation, VCSBE can use existing bus stop on the route. It is necessary to install route number, destination, and timetable at bus stops. You can use a piece of paper for these. Then, name each bus stop, and display bus route map and bus fare. Bus time table can use existing time table, not necessary to create new one. During the first phase, it is better to maintain current on-demand boarding and alighting bus operation system in parallel with new shuttle bus operation system. We

THE JICA PROJECT TO ENHANCE THE CAPACITY OF VIENTIANE CAPITAL STATE BUS ENTERPRISE

assume this combined new bus operation system will be able to expect an increase of new bus users who wait for bus at the bus stops. Keisei bus recommends this combined bus operation system start from route 14 as the first experiment to increase bus users and revenue.

Regarding ④, there are several means to improve, however, it is better to start from small actions for improvement. Such as;

- Display collect time at inside of bus
- Modify CBS bus time table
- Display amount of bus fare front side of inside of bus
- In addition, it is also recommended to display VCSBE bus route map and bus departure time table at CBS on tourist guide map. Tourist bus users might be increased.

3. Bus operation management

Keisei bus recommends VCSBE to control CBS office entrance key, drivers' working record check, and bus key check by manager at morning and evening. If it is difficult to conduct it 2 times a day, it is preferable to conduct it at least morning time. The manager should come to office earlier than drivers, then check drivers' working record and pass bus key from the manager to the drivers. Manager is required to communicate with drivers at least once a day and listen reporting from the drivers. By doing so, the manager is able to collect latest information from drivers and it will be effective for improvement of VCSBE management as well.

At the seminar on 30 October, Keisei Bus deeply understood that VCSBE has a serious sense of crisis of deficit. To increase revenue, it is important to increase the bus operation revenue firstly; in addition, it is important to consider (1) revision of contract condition between VCSBE and bus drivers, (2) Abolishment of deficit bus routes, (3) Increase of bus fare setting as well.

Keisei Bus understands VCSBE members' sincere commitment to their duty and some of you have leadership. Therefore we believe the improvement of VCSBE would surely succeed. We pray your success and good luck.

Registration

Meeting Topic: Seminar for Public Bus Transportation in Vientiane Capital

Place: VCSBE Meeting Room

Date: 14 July 2014

Time: 09:00 - 11:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
1	KHAMPHOUNE	Director	VCSBE	55512183		
2	Manibone		VCSBE	23273398		
3	Vongsoack	Chief of infrastructure Unit	PTI	55614535	vongsoack@yahoo.com	
4	Det Thammaphone	OFFICER	DPWT	22024400	PTI1477@gmail.com	
5	Mr. Moeng Chann	OFFICER	DPWT	55619525	/	
6	M. Thavongsy	chief of city bus	VCSBE	55675122		
7	Ms. cleanthavangro	Division Director	PTI	55620044	cleanthavangro@yahoo.com	
8	Mr. detthamang ONKSEVIN	staff	DOT	22323322	detth556@yahoo.com	
9	Mr. Bouapha Phatviny	Dep. Direct.	VCSBE	5551112		
10	Mr. Vandy	-	-	55606390		
11	Mr. Phimpho	Teacher	FEN	55335786	2-phimpho@hotmail.com	
12	Mr. Khomtime	student	FEN	9722295	khomtime556@hotmail.com	
	Mr. Phomxai	student	FEN	096072333	phomxai@hotmail.com	
	Mr. Phaisith	student	FEN	59621414	phaisith@hotmail.com	

Registration

Meeting Topic: Seminar for Public Bus Transportation in Vientiane Capital

Place: VCSBE Meeting Room

Date: 14 July 2014

Time: 09:00 - 11:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
13	Phongsavanh	Lecturer	NUOL	22211145	anthanongsavanh@yahoo.com	
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Public Bus Transportation in Vientiane Capital

14 July 2014

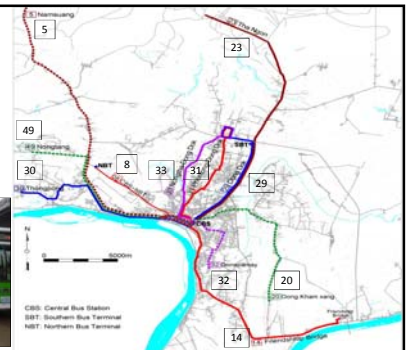
Contents

1. Public Bus Present Condition
2. Bus User Potential Survey Result
3. Develop Medium-Term(2014-2018)
4. Conclusion

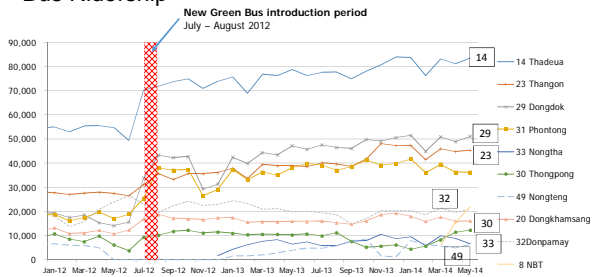
1. Public Bus Present Condition

VCSBE Town bus route (As of July 2014)

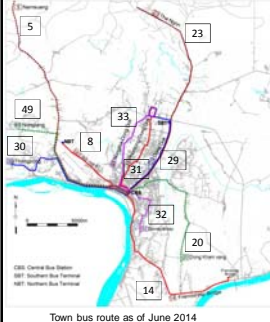
11 bus routes
Operated by
42 Air conditioned bus +
12 Minibus + 3 Electric bus



Bus Ridership

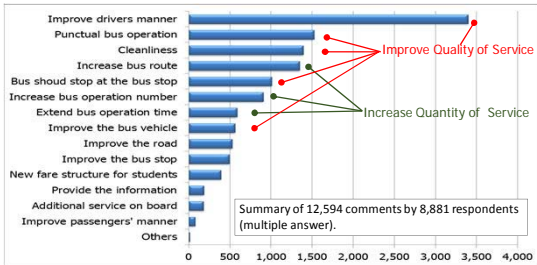


Bus Operation



No.	Route	Bus	Fare (kip)	CBS departure time and headway
14	CBS - Friendship Bridge	New Bus	6,000	5:50 - 18:00, every 15 minutes
20	CBS - Dong Kham xang	Minibus	4,000	6:30 - 17:20, every 25 minutes
23	CBS - SBT - Tha Ngon	New Bus	5,000	5:45 - 17:30, every 20 - 30 minutes
29	CBS - SBT - Dong Dok	New Bus	3,000	6:30 - 18:00, every 15 - 20 minutes
30	CBS - Thongpang	New Bus	4,000	6:00 - 17:30, every 20 - 30 minutes
31	CBS - Phontong - Dong Dok	New Bus	3,000	6:10 - 17:30, every 20 minutes
32	CBS - Donepamay	Minibus Specific Bus	2,000	6:30 - 17:55, every 15 - 20 minutes
33	CBS - Nongtha - Dong Dok	New Bus	3,000	6:10 - 17:20, every 30 - 60 minutes
49	CBS - Sikay - Nonglang	Minibus	4,000	6:15 - 17:30, every 35 - 60 minutes
08	CBS - Northern Bus Terminal	New Bus	5,000	6:00 minutes, every 30 minutes
05	CBS - Namsuamg	Minibus	10,000	10:30, 16:30

Request from bus user



Problems (No. of Bus)



Lack of Bus vehicle
Especially, medium size bus which is suited for narrow road and feeder service is needed.



Decrepit Bus
Lack of service level of inter regional and international route.

Passenger decrease → Increasingly unfavorable business conditions
Maintenance cost increase

Problems (Actual situation)



Road Pavement Condition
Produce damage to Bus body and mechanical parts.



Illegal Parking
Cars parked illegally interfere with the punctual bus operation.

Bus Users and Potential Bus Users Opinion Survey

Objective

- To grasp bus needs and requirement of Vientiane Citizens
- To research bus users and non-bus users demand of public bus
- To increase bus users

Survey duration

Middle - Late March 2014

Target

- Vientiane people who live or work in the following districts.
 - Up to 18-over 70 years old.
- Total 800 persons

Interview place and Numbers

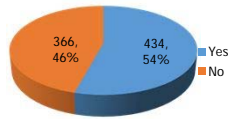
	District	No. of Interviews			
		Total	Company Employee	Inhabitants (place of 0-500m from Bus Route)	Inhabitants (place of more than 500m from Bus Route)
1	CHANTHABOULY (City)	100	30	35	35
2	SIKHOTTABONG (City)	110		55	55
3	XAYSETHA (City)	110	30	35	35
4	SISATTANAK (City)	100	30	35	35
5	NAXAYTONG (Outskirts)	100		50	50
6	XAYTHANY (Outskirts)	130		65	65
7	HATXAYFONG (Outskirts)	100		50	50
9	PARKNGUEM (Outskirts)	50		-	50
	Total	800			

Employee at Company: To ask company employee at random
Inhabitants (place of 500m from Bus Route) : To ask resident within 500m from bus route at random
Inhabitants (place of more than 500m from Bus Route) : To ask resident over 500m from bus route at random

Questionnaire

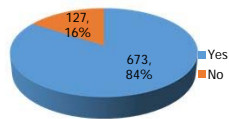
Do you use VCSBE bus or commuting or on daily basis travel from your house?

434 out of 800 "YES"
366 out of 800 "No"



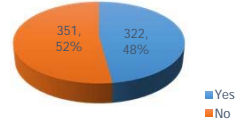
Do you have an available car or motorbike?

673 out of 800 "YES"
127 out of 800 "No"

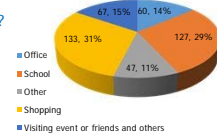


Car or motorbike Owner
But Bus user

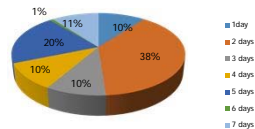
322 out of 673 "YES"
351 out of 673 "No"



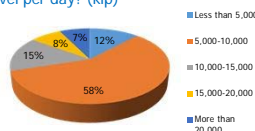
What purpose do you use public bus?



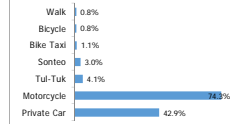
How many days do you use bus per week?



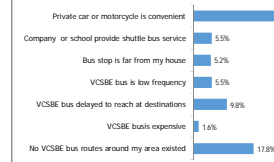
How much do you pay all costs for your travel per day? (kip)
(For Bus User)



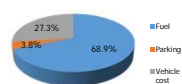
What kind of transportation means do you use?



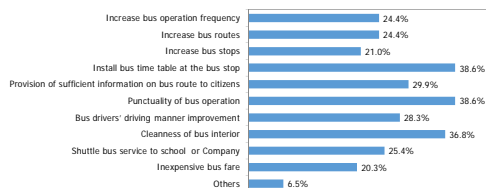
Why do not use bus?



Most expensive items for transportation cost



What kind of advice would you suggest to public bus service to increase bus users?



Complain from Car and Motor bike User

- Bus is Low Speed.
- Bus is block the passage. Specially, when a Bus is running on narrow roads.

Mobility

Car and Motorbike users need understanding "Traffic Coexistence".

Bus Operation

When the Bus running on narrow roads, it should distribute Medium size Bus

But Lack of Bus vehicle



**Develop Medium-Term (2014-2018)
Public Bus Transportation Plan**

Policy and Strategy of Master Plan

- 1 Road Network Development Plan
 - Improvement of Road Network
- 2 Public Transport Development Plan
 - Improvement level of service and reliability of Bus Operation
 - Bus priority or exclusive lanes
- 3 Traffic Demand Management Plan
 - Parking Regulations and Parking measures
 - Improvement of Traffic Signal, Road and Intersection
 - Traffic Regulations
 - Traffic Enforcement

Targeted Year of Master Plan

Short Term Plan	(2009 – 2013)
Medium Term Plan	(2014 – 2018)
Long Term Plan	(2019 – 2025)

Selection of Present Problem and Issue

- Road Network, Pavement Condition
- **Public Transport**
- Traffic Management, Safety and Enforcement
- Traffic Congestion by peak hour
- Urban Structure

Traffic Signal Operation

Traffic congestion by peak hour is worsening at Intersection in Vientiane City.

If there is optimum signal operation, can reduce traffic congestion.

- ✓ Reduction of travel time
- ✓ Reduction of travel cost
- ✓ Reduction of emission gas



Traffic congestion by peak hour at Lao-America Intersection April, 2014

Location of Traffic Signal



Source :MPWT

After setting up the new traffic signal (phasing and timing) by MPWT,

Traffic congestion was mitigated than before.

Traffic situation by peak hour at Lao-America Intersection June 2014

Continued Policy and Strategy

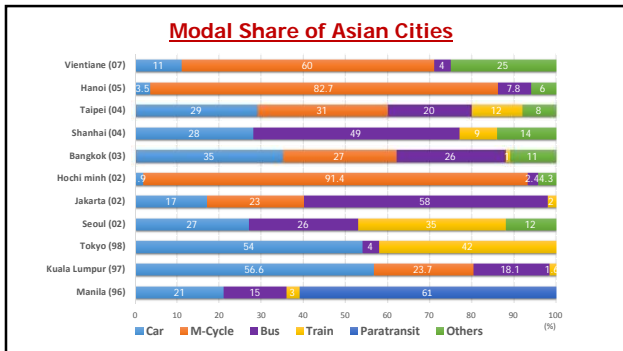
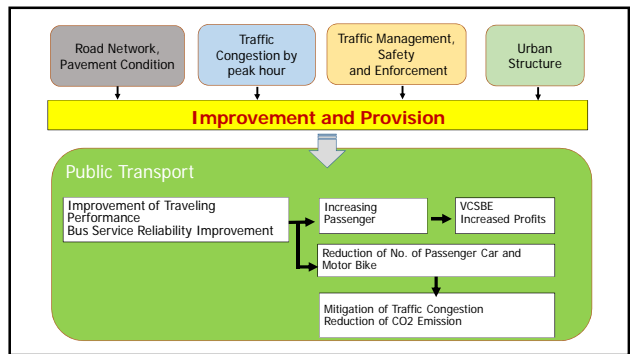
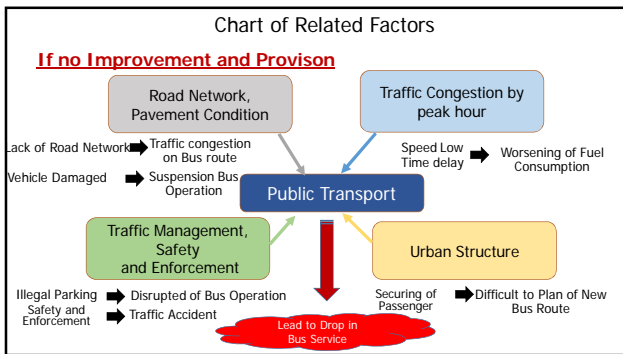
Traffic congestion can be mitigation by optimization of traffic signal control.

Could be mitigation the traffic congestion by few years.

But It should not resort only signal control.

Because traffic congestion is not completely resolution only signal control.

Because traffic volume exceed road capacity substantially.



Project Term of Master Plan

Targeted Public Bus Share

Year 2007 was 4.0%

Short Term Plan (2009 – 2013)
Targeted ➔ 15.0%

Medium Term Plan (2014 – 2018)
Targeted ➔ 25.0%

Long Term Plan (2019 – 2025)
Targeted ➔ 40.0%

Conclusion

- It needs overall transport strategy. (Government)
- It needs cooperation from government-related organization and donor. (Government)
- Civil needs awareness for traffic problem. (Civil)
- Bus Service Improvement also is needed. (VCSBE)



Lead to Acceleration of Public Bus Transport

Seminar on Traffic Counting by Smart phone

Date: September 19 (Friday), 2014

Time: 13:30 to 15:30

Venue: VCSBE Meeting Room

Agenda:

13:30: Opening Speech

13:35: Professor Mr. Nishida Junji
“Traffic Counting by Smart Phone and its application”

14:35: Survey and Activity Results by Intern
Mr. Imaizumi Seiya
“Fare setting for Bus pass for Citizen”
Mr. Katayam Hayato
“ Mobility survey of Student in NUOL”

15:15: Discussion

15:30: Closing

Registration

Meeting Topic: Seminar on Traffic Counting by Smart phone

Place: VCSBE Meeting Room

Date: 19 September 2014

Time: 13:30 - 15:30

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
1	Mr. Vanly Chanchanleung	DEP.DIR	VCSBE	55606390		
2	Mr. Bounpone Phongmany	DEP.DIR	VCSBE	55512185		
3	Mr. Khayphavanh OUDOMSACK	IT	VCSBE	99497131		
4	Mr. Punsouk Reunmesay	IT	VCSBE	55821115		
5	Mr. Kham savang	Finance	VCSBE	56660101		
6	Mr. Thanongsy	Chief of Planning section	VCSBE	55675122		
7	Mr. Korlakothe	Finance	VCSBE	556555236		
8	Mr. hayato Katayama	Internships	Jica Team			
9	Mr. Seiya Imaizumi	Internships	Jica Team			
10	Mr. ath Naovalangsy	Officer	DPWT	22228987		
11	Mr. Somsanith HOUATHOUNGKHAM	Officer Unit Transport	DPwWT	22242568		
12	Mr. Somnuk Mektakul	Director	Traffic Management /DOT	22210977		
13	Mr. Putthsay SIRISACK	Officer	DOT	55131757		

Registration

Meeting Topic: Seminar on Traffic Counting by Smart phone

Place: VCSBE Meeting Room

Date: 19 September 2014

Time: 13:30 - 15:30

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍເຊັນ Signature
14	Mr. Phatboun Pharksoundalai	Officer	Traffic Police			
15	Mr. Bounthone Phoumsavath	Manager	LTC	55590425		
16	Mr. Phetsamone Sysanhooth	DY. Serton	LTC	55649549		
17	Mr. Lotniyom Oudomsack	Access Network	LTC	55600122		
18	Mr.phonsavanh inthavong	Lecture	NUOL	22211145		
12	Mr. Vernsone Phengsouliith	Instructor	NUOL	22483100		
13	Mr. Junji Nishida		JRISS			
14	Ms. Akiko Kishime	Project Formulation Advisor	Jica project team			
15	Mr. Phouthavishet Phommanivong	Student	Hiroshima University			
16	Mr. Toda Toshinori	JICA EXPERT	KEI			
17	Mr. Noriyuki Mori	JICA EXPERT	MPWT			
18	Mr. Bhoj Raj Phantha	JICA EXPERT	Jica Team			
19	Mr. Natsuki Shimegi	JICA EXPERT	KEI			

Jriss

Application of Ubiquitous Technology to Urban and Transportation Planning



September 2014
Junji Nishida

Jriss

Today's Subjects

1. Application of Ubiquitous Technology
2. Results of Analysis about Probe ITS in Vientiane

1

Jriss

Self - Introduction

2

Jriss

Career

- 1980 Kyoto University, Department of Civil Engineering
- 1980 Chuo Fukken Consultants Co., Ltd.
- 1986 Digital Equipments Corp. (DEC)
- 1988 Hankyu Railway Corp.
 - Urban Developments in the Senri Area , north Osaka
 - Earthquake Reconstruction Projects
- 2004 Established Japan Research Institute for Social Systems
 - Smart Card system for public transport
 - ETC Card system for Toll Highway
 - Traffic information system using mobile phone
 - Bus Information system using digital signage, mobile phone
- 2014 CEO and President JRIS
 - Adjunct Professor Graduate School of Management , Kyoto Univ.
 - Contract lecturer at Osaka Univ.
 - Special lecturer at Tokyo Univ.
 - Director Ueda College of Fashion



3

Jriss

Six Technology constitute Ubiquitous



4

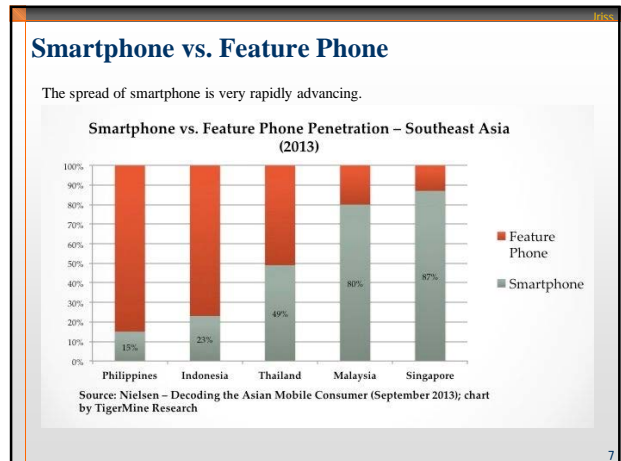
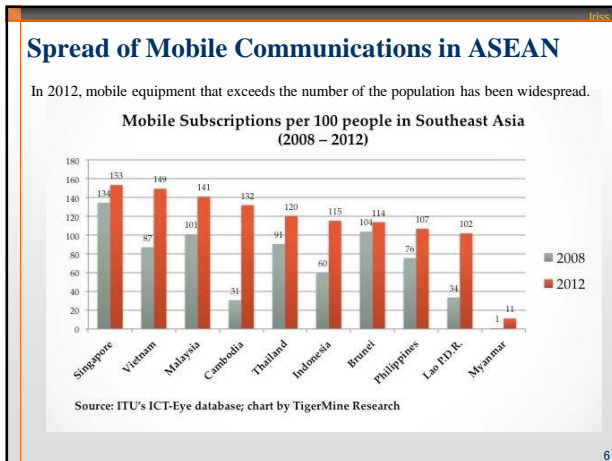
Jriss

1. Smart Phone

Smart Phone is not only a small computer that can communicate.

But it is equipped with a wide variety of Sensors.

5



Many Apps by using Sensors

- Voice Call
- Internet Service
- E-mail
- Wi-Fi Communication
- Positioning by GPS
- Orientation by E-Compass
- Image Recognition
- Speech Recognition

Various Sensors

- Positioning**: GPS, Wi-Fi, 3G/4G
- Image Recognition**: Camera (Front, Back)
- Voice Recognition**: Mike
- Orientation**: Electronic Compass
- Detection/movement**: Acceleration, Tilt Sensor

Smartphone is usable as Drive Recorder

Insurance Company is distributed this App for free

The app provides features such as:

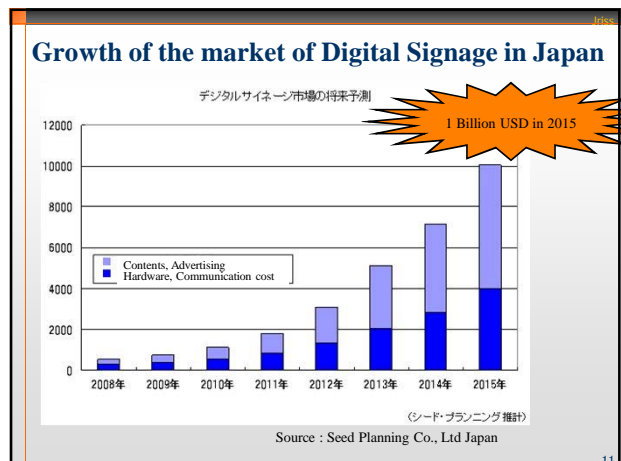
- Real-time driving data recording (speed, location, time).
- Accident detection and recording.
- Integration with insurance companies for claims.

2. Digital Signage

The signboard renewed anytime

At the place, at the time

Just necessary information is displayed



Bus Timetable on Digital Signage

Timetable and route of the present time is displayed by big letters

12

Same Information with Digital Signage and Smartphone

13

3. Positioning Technology

GPS(Global Positioning System)
Wi-Fi Positioning System

Google and Apple monopolize?

14

GPS Positioning and Wi-Fi Positioning

GPS: using wave from the satellite
↓
Impossible indoors

Wi-Fi: using wave from Wi-Fi device
↓
Possible indoors

visible sat = 12

Wikipedia Constellation GPS

15

All bus users want to know

When to arrive? Delayed by traffic jam?

16

Bus Location on Smartphone & PC-Browser

- Customer can check the position of the public bus on the route with using Smartphone.

17

4. Personal Identification

Personal Identifying Technology
vs.
Protection of Personal Information

24

Face Recognition , Biometric Authentication

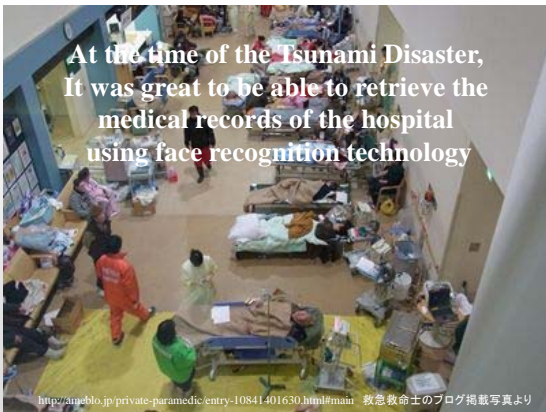
- Google Picasa can choose my Face Definitely



写真 : Google Picasa (クラウドサービス)を利用

25

At the time of the Tsunami Disaster,
It was great to be able to retrieve the
medical records of the hospital
using face recognition technology



<http://ambllo.jp/private-paramedic/entry-10841401630.html#main> 救急救命士のブログ掲載写真より

26

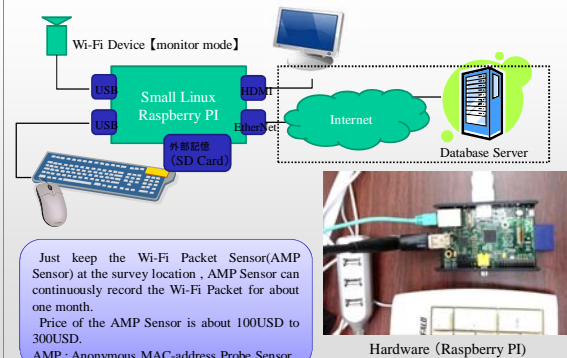
5. Wi-Fi Packet Sensor

- Many Information terminals are equipped with a Wi-Fi device
- Many Wi-Fi devices, even in the standby state, they are always transmit special packets
- This packet includes the MAC address, which is uniquely assigned to each device
- At the multiple location in the area, by receiving the packets We can grasp the movement of the object with a smartphone



27

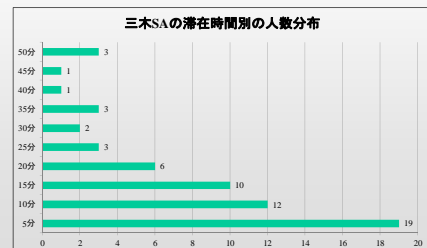
Wi-Fi Packet Sensor (AMP Sensor)



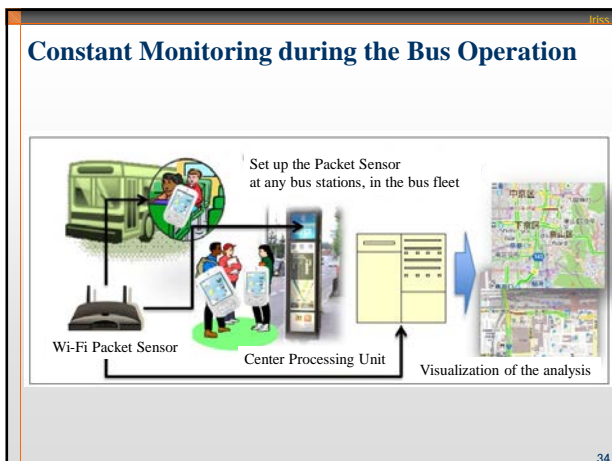
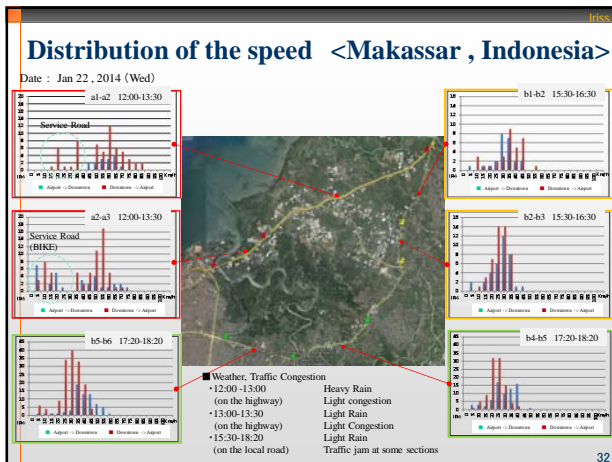
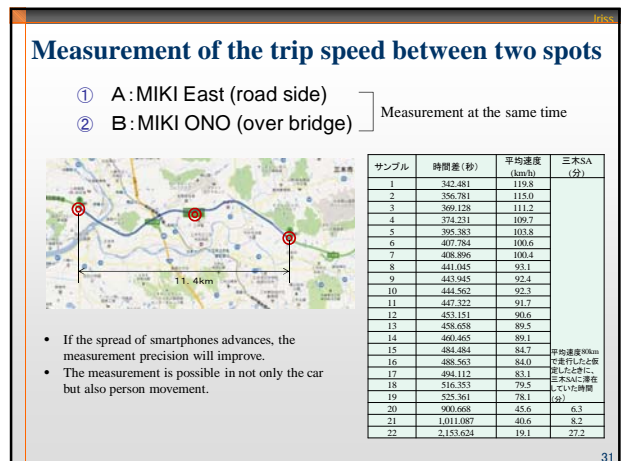
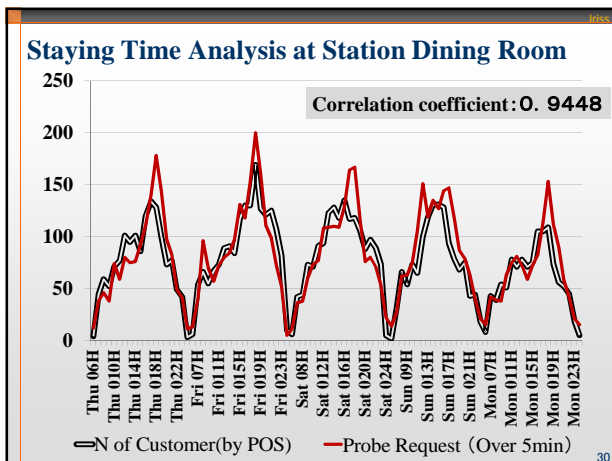
28

Staying Time analysis at the Highway Service Area

- At one place, measurements of time observed in succession
- You can measure the staying time at a market and the shopping center



29



6. Ubiquitous Communication Infra

Wi-Fi Service
 3G,4G Mobile phone Network
 Wireless Mesh

Seoul Forest

Large Park "Seoul Forest" in south Korea
Position of children is detected by using RFID Card

36

Multi Functional Street Light Pole

- Wi-Fi communication
- Wireless Mesh
- CCTV Camera , Speaker , Mike
- LED Color is remote control

Seoul Cheonggyecheon
←Seoul COMMTECH ↑

37

Wireless Mesh : Reliable & High-Speed

- Connecting like mesh the wireless communication equipment
- By using multiple communication channels, 100 ~ 400Mbps high-speed communication
- If some of the channel is disconnected, it is possible to communicate with another path. Wireless Mesh is difficult to down

【Wireless Mesh Feature】

- ① We can build the system in a short period
- ② Connect AP, sensors, and signage, to configure the area information system
- ③ As disaster recovery, and also be used in normal times
- ④ Even if some part is damaged , as soon as repaired automatically

38

Results of Analysis about Probe ITS in Vientiane Capital of the LAO P.D.R

September 2014

Japan Research Institute for Social Systems
Graduate School of Management , Kyoto University
Junji Nishida

39

Wi-Fi Packet Sensor

40

Measurement of Road Traffic

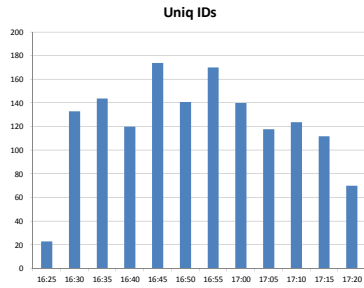
- Setting the sensors on Site A , Site B Distance - 600m

41

Road Side : Site-A

Sep. 15 Monday 2014

Time	Uniq IDs
16:25	23
16:30	133
16:35	144
16:40	120
16:45	174
16:50	141
16:55	170
17:00	140
17:05	118
17:10	124
17:15	112
17:20	70
Total	1,469



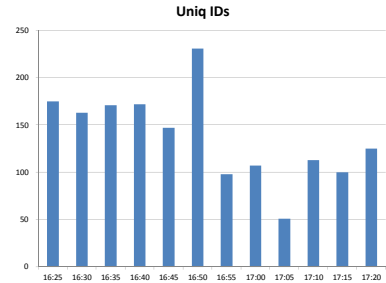
42

Road Side : Site-B

Motor Cycle	Passenger Car/Taxi, Pick-up, Van	Public Bus	Truck	Total
3,845	2,543	14	15	6,417

Sep. 15 Monday 2014

Time	Uniq IDs
16:25	175
16:30	163
16:35	171
16:40	172
16:45	147
16:50	231
16:55	98
17:00	107
17:05	51
17:10	113
17:15	100
17:20	125
Total	1,653

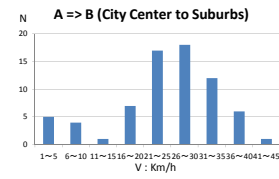
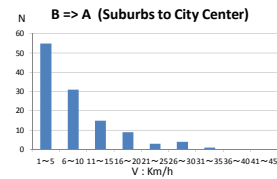


43

Velocity Distribution

- B=>A (Inbound) : Terrible traffic jam had occurred
- A=>B (Outbound) : Traffic flow was steady

Sep. 15 Monday 2014



1. Inbound						2. Outbound							
Direction	Vehicle Type	Motor Cycle	Passenger Car/Taxi, Pick-up, Van	Public Bus	Truck	Total	Direction	Vehicle Type	Motor Cycle	Passenger Car/Taxi, Pick-up, Van	Public Bus	Truck	Total
4:00 - 4:15		628	477	1	3	1109	4:00 - 4:15		299	254	1	2	556
4:15 - 4:30		633	377	3	1	1014	4:15 - 4:30		319	285	2	5	611
4:30 - 4:45		513	242	0	1	756	4:30 - 4:45		282	236	2	0	520
4:45 - 5:00		670	361	3	3	1037	4:45 - 5:00		312	187	2	0	501
5:00 - 5:15		125	87	0	0	212	5:00 - 5:15		64	37	0	0	101
Total		2569	1544	7	8	4128	Total		1276	999	7	7	2289

Wi-Fi Packet Sensing at Night Market

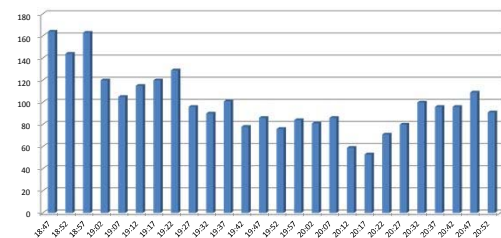


45

Number of Staying People in Night Market

- DATE/TIME Sep. 15 2014 (Monday) 18:47~20:52
- Peak time is around 7PM, then decreased.
- Over 60 - 160 people per 5 minutes are coming to the night market.
- If smartphone share is 50%, actually number of visitors will be double.

Number of Smartphone Unique IDs



46

Conclusion : Wi-Fi Packet Sensor

- Prevalence of smartphones in Vientiane city is high, Wi-Fi Packet Sensing System is very effective.
- The number of measuring unique ID is about 1,500/hour on congestion road side. Traffic Volume of the road is about 6,500/hour.
- About quarter of the vehicle on the road was detected by this sensor, and the number of ID that could be measured at two points is 200, so we can get 3% of the traffic for measuring the velocity of the vehicles.
- It is difficult to count the number of people in the wide area, but Wi-Fi Packet Sensor is very effective to count in such kind of area.

47



Radio Signal Strength of Mobile Phone Network

48

Method

- We measured the signal strength of mobile phone in the vehicle driving along the bus route.
- The subjects of measurement are (1) Lao telecom , (2) LTE .

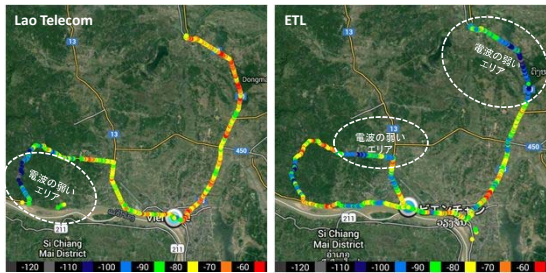
- Smartphone : Nexus5
- Application : G-NetTrack
- Route :
Line23 - Tha Ngon
Line49 - Nongtang



49

Result

- The left figure shows the signal strength of Lao Telecom, right shows of ETL. Red and yellow sections shows strong , gray and blue shows weak.
- Signal strength of Lao Telecom is stronger than ETL along the bus route.



50

Signal Strength of Cellular Phone Network

- Cellular Phone Network is fully covered along the Vientiane bus route area.
- Signal Strength of Lao Telecom is stronger than ETL along the bus route.
- Bus location service using Smartphone can be introduced in all Vientiane City Area.

51

Probe ITS by Smartphone



52

Congestion along Bus Routes <Mon Sep.16>



Real time Car Speed is indicated like Heat Map.
The red sections show the speed under 30km/h

53

Congestion along Bus Routes <Sun Sep.14>



54

Probe ITS for Public Bus

- By using Bus Location System, We can get information about traffic status in the city.
- Cellular Phone Network is covered all Vientiane city area, Probe ITS by using Smartphone system is effective.
- By distribution the information of congestion line on Internet , drivers can select the way to avoid the congestion route.
- It is not only useful for bus management , but also it is effective in reducing road congestion.

55

Thank you for your attention

56

Registration

Meeting Topic: 1st Training for JICA STRADA

Place: Computer Room (Faculty of Engineering)

Date: 01st March 2013

Time: 09:00 - 11:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address
1	Ms.Amphayvanh KEOPADITH	Officer of Traffic Management and License Division	DOT		
2	Mr.Dethmany OANSOUVANH	Officer of Traffic Management and License Division	DOT		
3	Mr.Bounsouk SIBOUNTHAN	Deputy chief Technical and Workshop Division	VCSBE		
4	Ms.Souphany	Officer	DOT		
5	Mr.Thanongsy DEDVONGSONE	Chief of Domestic Car Transport Division	VCSBE		
6	Mr.Sisouphanh PHOMMANIVONG	LUCTURER	Department of Road - Bridge and Transportation (FOE)		
7	Mr.Yorthavy KHAMpanya				
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

THE PROJECT TO ENHANCE THE CAPACITY OF VIENTIANE CAPITAL STATE BUS ENTERPRISE

JICA STRADA & Transportation Demand Forecast

KUNIMASA Yoshiro

March, 2013

OUTLINE OF TRAINING

- 2 hour training, once a week
Start from 9 am, 1st Mar, 2013.
4 times training in total.
- Required knowledge
 - Basic knowledge of traffic engineering
 - Basic knowledge of the Microsoft Excel
 - Basic knowledge of Statistics
- Achievement Goals
 - To understand Transportation Demand Forecast
 - To understand functions of JICA STRADA

TRAINING PROGRAM

1. Introduction (1 Mar)
2. Transportation Demand Forecast (8 Mar ?)
3. Transportation Models (15 Mar)
4. Other Program Modules (22 Mar)

WHAT IS JICA STRADA?

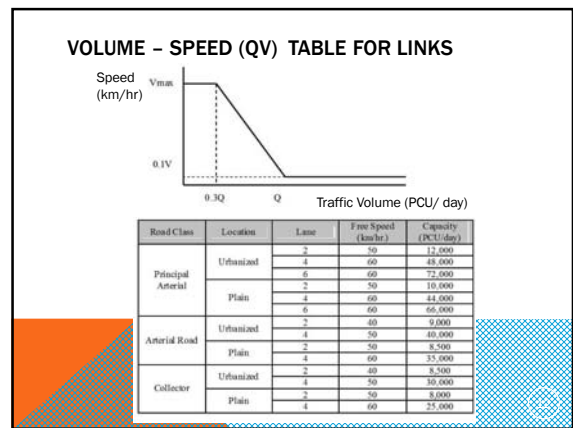
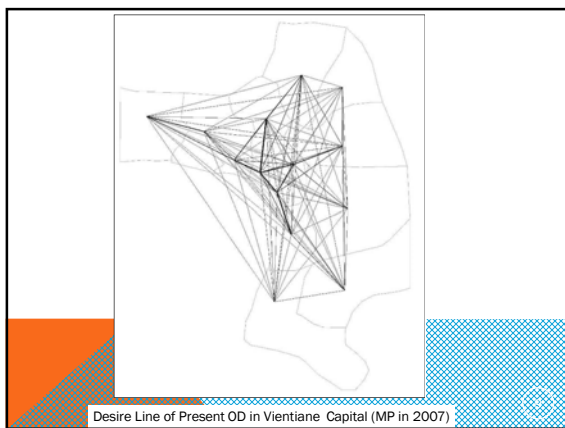
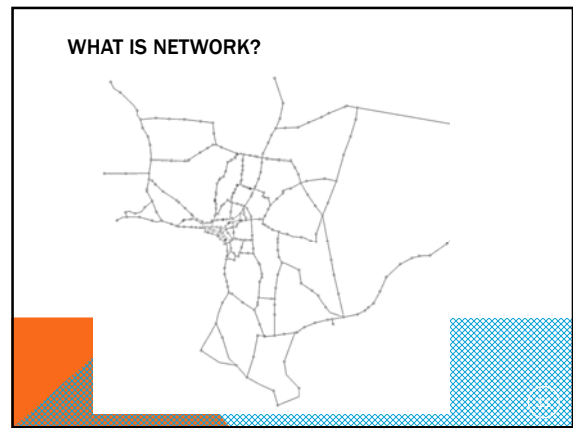
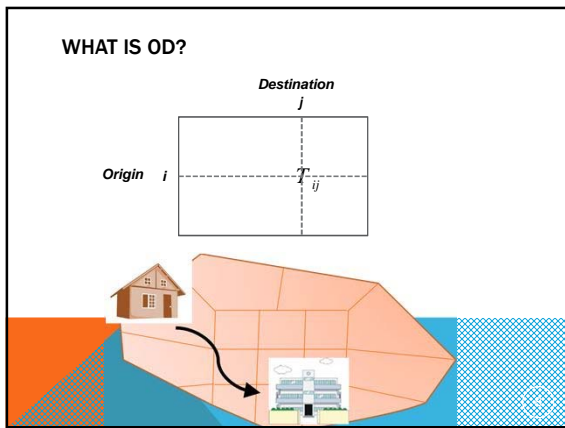
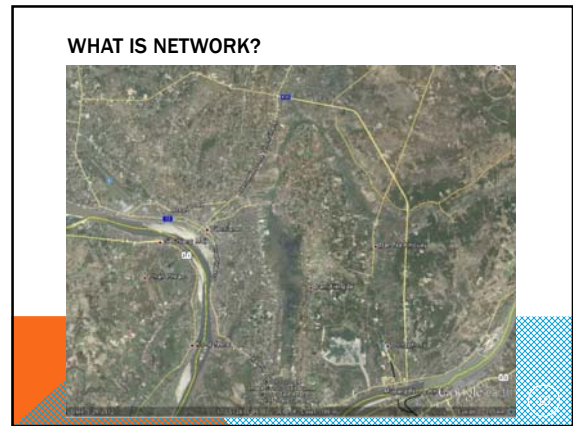
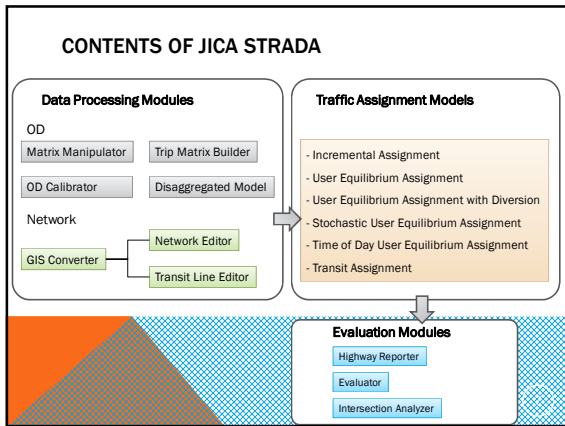
- JICA STRADA is a package system for transport forecasting.
- The system development project completed in 1997, lead by Prof. Hideo Nakamura of Tokyo University in cooperation with Japanese experts from the Ministry of Construction, the Ministry of Transportation and private consultants.
- Since then, continual upgrading has been conducted and it provides version 3.5 as the newest package
- JICA STRADA 3.5 consists of 18 programs, which can be categorized as Traffic Assignment Models, Data Processing Modules, and Evaluation Modules.
- Commercially available through E-mail: strada@intel-tech.co.jp
Prices
 - 1 licenses for general: Yen 294,000 (USD 3,270)
 - for Educational Institute: Yen 36,750 (USD 408)
 - more than 10 licenses: Yen 33,600 (USD 373) each

TODAY'S CONTENTS (INTRODUCTION)

1. Questionnaire
2. Outline of training
3. What is JICA STRADA?
4. What JICA STRADA can do?
5. Contents of JICA STRADA
6. Introduction of self-study tools
 - Tutorials
 - Help menu and sample data
 - Update Software
7. Practice

WHAT JICA STRADA CAN DO?

- Macro Simulation for Transportation Demand Forecast by several methods
- Economic and Financial Analysis of Transportation Construction and/or Improvement Project
- Suitable for Comprehensive Transportation Master Plan
- Disaggregate Model Building
- Evaluation of Traffic Regulation (One way traffic regulation)
- Signalized Intersection Analysis for 4-leg Intersection with Saturation Rate
- Evaluation of Traffic Signal Control is not suitable
- Simulation of Individual Traffic Movement is not suitable



Photos



Registration

Meeting Topic: 2nd Training for JICA STRADA

Place: Computer Room (Faculty of Engineering)

Date: 07th March 2013

Time: 09:00 - 10:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address
1	Ms.Souphany	Officer	DOT		
2	Ms.Amphayvanh KEOPADITH	Officer of Traffic Management and License Division	DOT		
3	Mr. Khemphone CHANSUVANH	IT Staff	VCSBE		
4	Mr.Bounsouk SIBOUNTHAN	Deputy chief Technical and Workshop Division	VCSBE		
5	Ms.Amphaphone BOUNNARK	Officer	DOT		
6	Mr.Dethmany OANSOUVANH	Officer of Traffic Management and License Division	DOT		
7	Mr.Thanongsy DEDVONGSSONE	Chief of Domestic Car Transport Division	VCSBE		
8	Mr.Sisouphanh PHOMMANIVONG				
9	Mr.Khamathidded MANYKHAM	Officer	DOT		
10	Mr.Yorthavy KHAMPANYA	LUCTURER	Department of Road - Bridge and Transportation (FOE)		
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

THE PROJECT TO ENHANCE THE CAPACITY OF VIENTIANE CAPITAL STATE BUS ENTERPRISE

JICA STRADA &
Transportation Demand Forecast
Vol. 2

KUNIMASA Yoshiro

March, 2013

TRAINING PROGRAM

1. Introduction (1 Mar)
2. Outline of Transportation Demand Forecast, Excel practice, Practice 1 : Update Network (7 Mar)
3. Practice 2 : One-way Traffic Regulation in CBS (7 Mar)
Practice 3: Demand Forecast for Bus Service Improvement (15 Mar)
4. Other Program Modules (22 Mar)

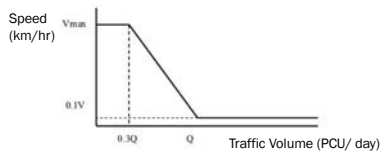
TODAY'S CONTENTS (INTRODUCTION)

1. Introduction of Macro & Micro Simulation
2. Outline of Transportation Demand Forecast
 - What is the Transportation?
 - What is Transportation Demand Forecast ?
 - Limitation of Traffic Demand Forecast
3. Quick Explanation of Traffic Assignment Models
 - Models
 - Discussion on incremental assignment model
 - Practice of Wardrop's equal travel principle
4. Practice 1: One-way Traffic Regulation in CBS

1. INTRODUCTION OF MACRO & MICRO SIMULATION

Item	Macro Simulation	Micro Simulation
Model	Fluid-flow Model	Car Following Model
Traffic volume	OD traffic volume	Individual vehicle
Applicable area	- Whole country - Urban area - Region	- City - Town - Intersections
Route selection	Based on volume- speed (QV) relation ship	1. Traffic volume ratio by direction at intersection 2. Dynamic route selection
Vehicle movement - Lane change - Turn at intersection	Not considered	Considered
Intersection analysis	Saturation rate of intersection (Intersection Analyzer)	Queue length, Travel time, loss time, etc.

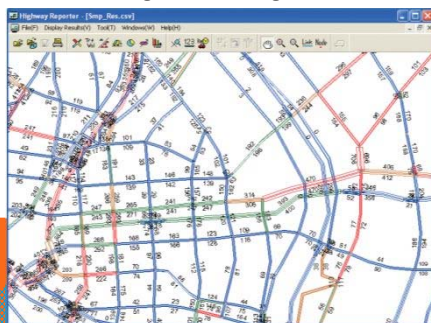
VOLUME - SPEED (QV) TABLE FOR LINKS



Road Class	Location	Lane	Free Speed (km/hr)	Capacity (PCU/day)
Principal Arterial	Urbanized	2	50	12,000
		4	60	48,000
		6	60	72,000
	Plain	2	50	10,000
		4	60	44,000
		6	60	66,000
Arterial Road	Urbanized	2	60	9,000
		4	50	40,000
	Plain	2	50	8,500
Collector	Urbanized	2	60	35,000
		4	50	30,000
	Plain	2	50	8,000
		4	60	25,000

MACRO SIMULATION

- Traffic flow assignment from Origin to Destination



MICRO SIMULATION

- Traffic flow simulation using individual movement

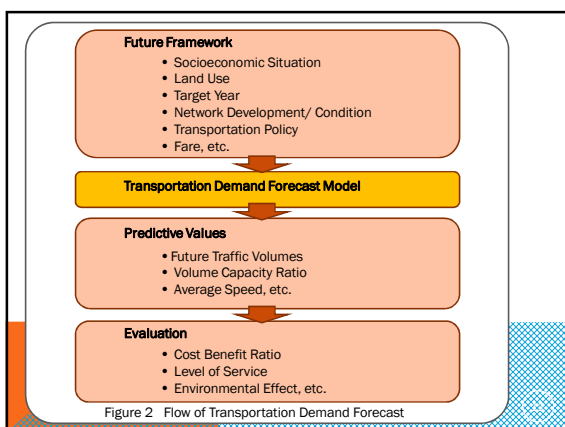
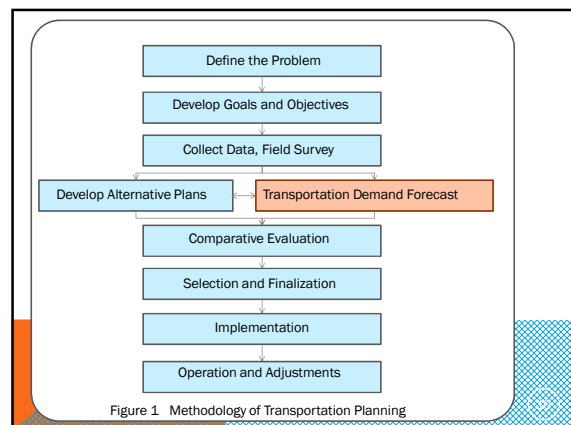
2. OUTLINE OF TRANSPORTATION DEMAND FORECAST

2.1 What is the Transportation?

- One trip has one trip purpose. No matter how many transportation modes are used, as far as it is continuous travel with same purpose, it is regarded as one trip.
- For Transportation Demand Forecast, it is usually estimated daily traffic volume.
- Hourly traffic volume is calculated from daily traffic volume, and it is also used for transportation planning.

2.2 What is Transportation Demand Forecast ?

- Transportation Demand Forecast is a part of Transportation Planning and basis of transportation policy design and /or transportation planning design.
- Transportation Demand Forecast is required to be enough scientific to estimate future transportation demand so as to evaluate alternative plans in a reasonable and accountable manner.
- Transportation Demand Forecast is not a firm prediction of future transportation demand, but a what-if evaluation based on some premises in the future social conditions, land use and transportation conditions.



2.3 Limitation of Traffic Demand Forecast

- Traffic demand forecast is based on data, which are socioeconomic, OD, and transportation network. So that, it's accuracy is derived from the accuracy of those data.
- At the same time, it is necessary to take into consideration that some errors in data is unavoidable.
- Future traffic demand forecast is a result of calculation under the assumption of future socioeconomic condition, land use and transportation network. Consequently, the actual traffic volume would be different from that of forecasted if the assumptions are different from actual condition.

3. Quick Explanation of Traffic Assignment Models (1/2)

Traffic Assignment Model	Description
Incremental Assignment	A conventional method applied to MP 2007. This model divides the input OD traffic volume into user-specified number and ratio (i.e. 20%,20%,20%,20%,20%). Then, it assigns divided volume to the minimum cost route step-by-step.
User Equilibrium Assignment	Theoretical basis is Wardrop's equal travel principle.
Stochastic User Equilibrium Assignment	User Equilibrium Assignment with assumption that route selection contains errors due to users not awareness of possibility of route selection. The model is logit-type for multi-modal traffic assignment.

3. Quick Explanation of Traffic Assignment Models (2/2)

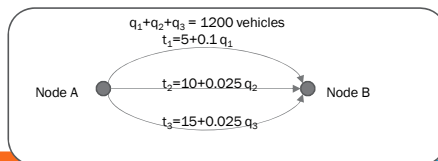
Traffic Assignment Model	Description
User Equilibrium Assignment with Diversion	A method for toll-expressway with general road network. Share of expressway and general road is expressed with split model of logit-type and traffic assignments of each type of road are developed by Wardrop's equal travel principle. New program deployed in ver 3.5.
Time of Day User Equilibrium Assignment	A method for hourly traffic flow assignment with consideration of residual traffic that is left over to the next time duration.
Transit Assignment	A method to estimate the user volume of public transportation (bus, train, etc.)

Discussion on Incremental Assignment Model

- Some scientists criticize that even though the method is approximate realization of user equilibrium assignment, actual theoretical basis is not clear.
- The scientists also criticize that the assigned traffic volume is changed by the settings of dividing ratio.
- On the other hand, the process of calculation is easy to understand and still applied to many MP in the world. In addition, as far as the parameters are disclosed, everybody can recalculate and same results come out.

Wardrop's equal travel principle

- The User Equilibrium Assignment uses Wardrop's equal travel time principle for traffic assignment. Wardrop's equal travel time principle is *The journey times on all the routes actually used are equal, and less than those which would be experienced by a single vehicle on any unused route.*



Practice: Calculate traffic volume and travel time of each route by excel

Practice of Wardrop's equal travel principle

- Use Microsoft Excel Analysis tool "Solver"

1. Activate Solver tool
File -> Option
Add-In -> Settings
Check box of Solver and activate it

2. Set data to calculate

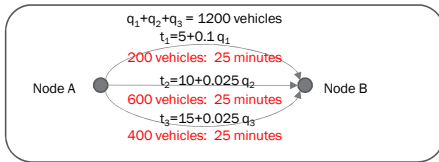
	A	B	C
1	Route	Traffic Volume (Vehicle)	Time (minutes)
2	1		=5+0.1*B2
3	2		=10+0.025*B3
4	3		=15+0.025*B4
5	Total	=SUM(B2:B4)	

Practice of Wardrop's equal travel principle

3. Solver

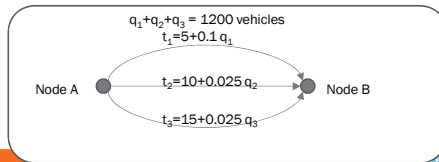


Practice of Wardrop's equal travel principle



Incremental Assignment

- Incremental assignment divides the input OD traffic volume into user-specified number and ratio
- It assigns divided volume to the minimum cost route step-by-step.



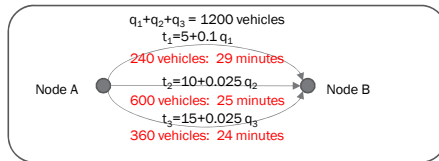
Practice: Calculate traffic volume and travel time of each route by excel

Practice of Incremental Assignment

- 10 times assignment with each ratio is 0.1

	A	B	C	D	E	F	G	H	I	J	K
8	Assignment	Ratio	Assigned Traffic Volume (Vehicle)	t1 (minutes)	t2 (minutes)	t3 (minutes)	Q1 (Vehicle/day)	Q2 (Vehicle/day)	Q3 (Vehicle/day)		
9	1	0.1	=B9*\$C\$19	=5+0.1*I9	=10+0.025*I9	=15+0.025*I9	0	0	0		
10	2	0.1	Drag down to copy	Drag down to copy	Drag down to copy		=IF(E9=MIN(\$E9:\$G9),I9+\$C9,I9)	=IF(F9=MIN(\$E9:\$G9),J9+\$C9,J9)	=IF(G9=MIN(\$E9:\$G9),K9+\$C9,K9)		
18	10	0.1	Drag down to copy	Drag down to copy	Drag down to copy						
19	Total		=SUM(B9:B18)	1200							

Incremental Assignment



Registration

Meeting Topic: 3rd Training for JICA STRADA

Place: Computer Room (Faculty of Engineering)

Date: 15th March 2013

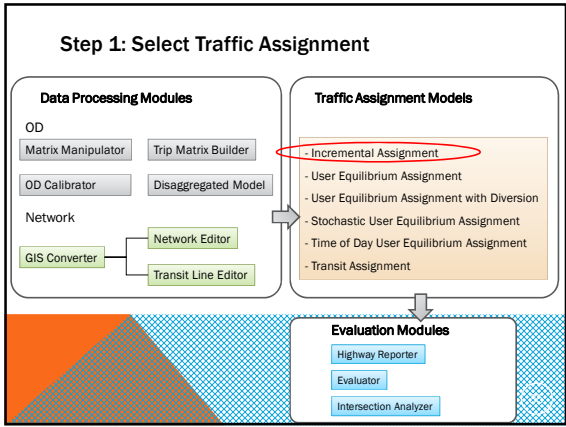
Time: 09:00 - 10:00

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address
1	Mr.Dethmany OANSOUVANH	Officer of Traffic Management and Licese Division	DOT		
2	Ms.Amphayvanh KEOPADITH	Officer of Traffic Management and Licese Division	DOT		
3	Mr. Khemphone CHANSUVANH	IT Staff	VCSBE		
4	Mr.Bounsouk SIBOUNTHAN	Deputy chief Technical and Workshop Division	VCSBE		
5	Mr.Thanongsy DEDVONGSONE	Chief of Domestic Car Transport Division	VCSBE		
6	Mr.Sisouphanh PHOMMANIVONG	LUCTURER	Department of Road - Bridge andTransportation (FOE)		
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5. Practice 1

Objective: Add new link of bank roads (Network Editor)
Calculate Traffic Demand (Incremental Assignment)

Base network: 2007 MP Present network
(Net2007_Veh4-original.csv)
OD : 2013 OD (2013VEOD_DN.aod)
Parameter : Veh4_2013original.PAR



UPDATE LINK INFORMATION

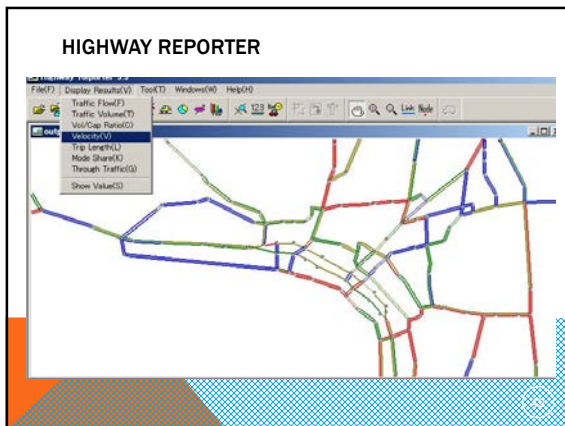
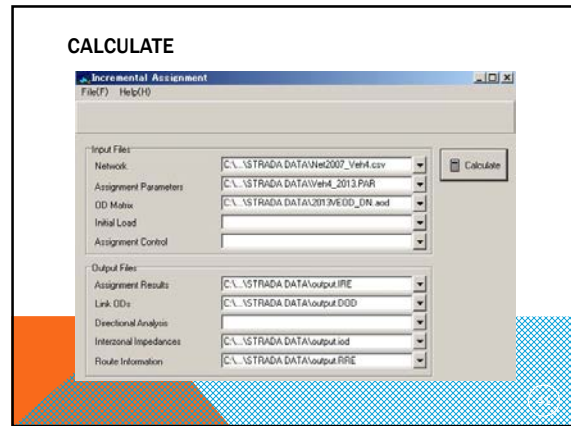
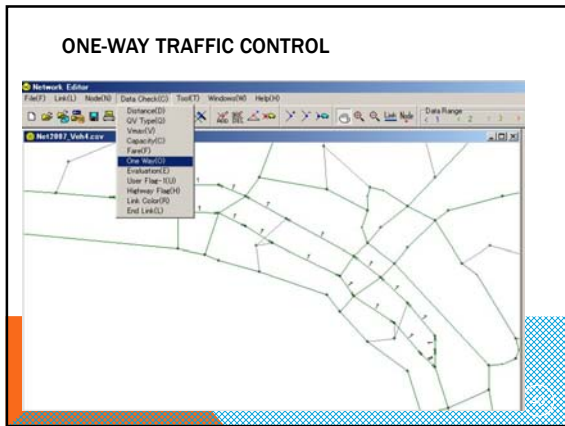
3.0km
Velocity(km/h): 40.0
Qmax(vehicle/day): 9,000

ADD NEW NODE

ADD NEW LINK

Link Name	Node Name	Distance
L2	N1 50	0.3
L3	357 N2	1.3
L4	N2 362	0.2

UPDATE PARAMETER



6. Practice 2

Objective: Create Network (Network Editor)
Calculate Traffic Demand
(User Equilibrium Assignment)

Created network: Net2013_pra2.INT
OD : 2013OD_pra2.aod
Parameter : Par2013_pra2.PAR

Step 0: Create Network by Network Editor

Define the problem
- Congestion at the peak hour

Develop goals and objectives
- To reduce congestion

Collect data, field survey
- Road: Lane number, Width
- Control at Intersection

Set appropriate model
- User Equilibrium Model
- Hourly traffic volume

Step 1: Select Method of Network Creation

Network GIS Data exists Yes No

Yes No

GIS Converter

Create Network by GIS Yes No

GIS

GIS Converter

Create Network by Network Editor

Tip: Google Earth can be used for support tool to create network data

LIMITATION OF GIS CONVERTER

- GIS converter supports MapInfo and ArcView files.
- Basic feature classes are only covered such as Polyline, Point and Polygon, whereas MultiPoint is not converted, for ArcView.
- If a GIS file contains several feature class, GIS converter process only the drawings of the first chosen feature class.
- STRADA network requires link to be closed that means each adjacent links shall be connect to the same node. Whereas, GIS data does not requires nodes for links. Consequently, before conversion, data cleaning is required to fit the requirements of GIS converter.
- GIS converter can also convert STRADA data to GIS, thus it is possible to create figures showing result of STRADA by GIS software.
- Further information shall be refer to Help of GIS converter.

Step 2: Create Network by Network Editor

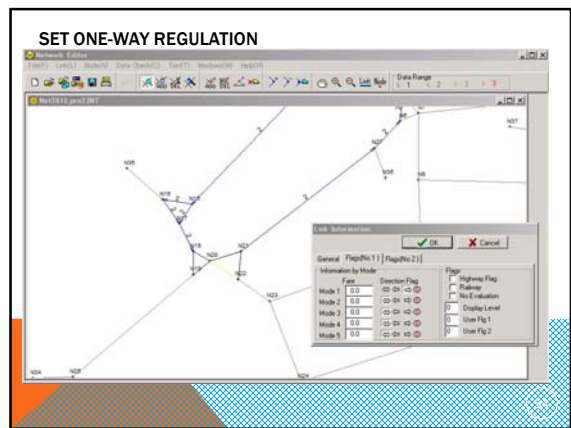
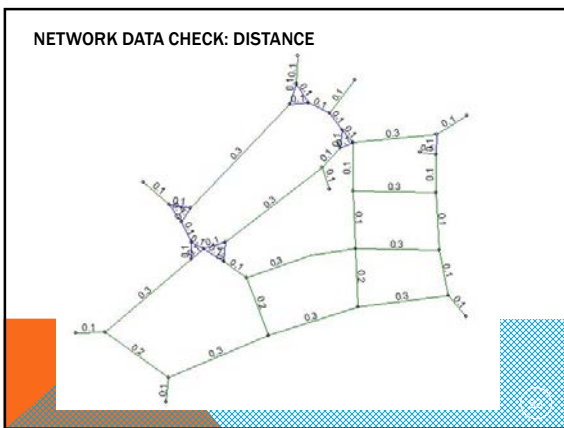
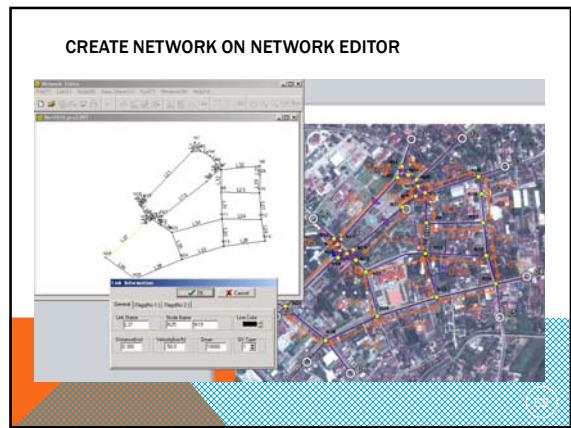
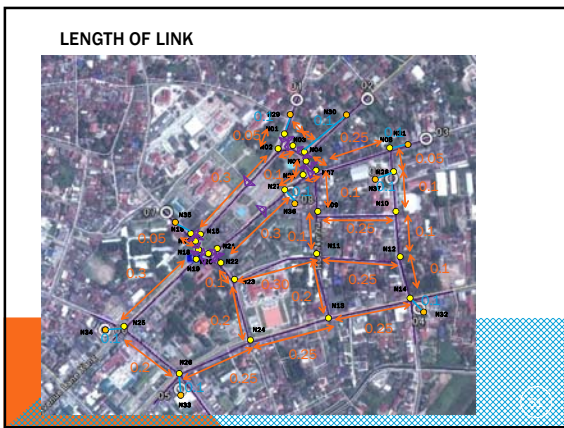
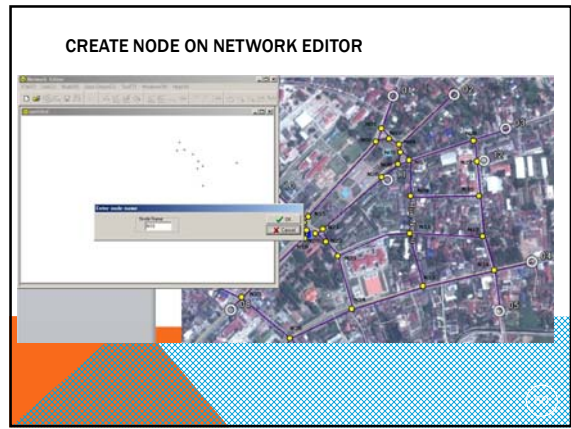
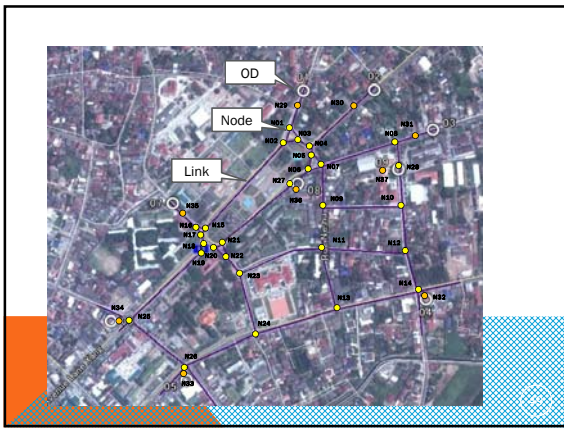
Create draft on Google Earth

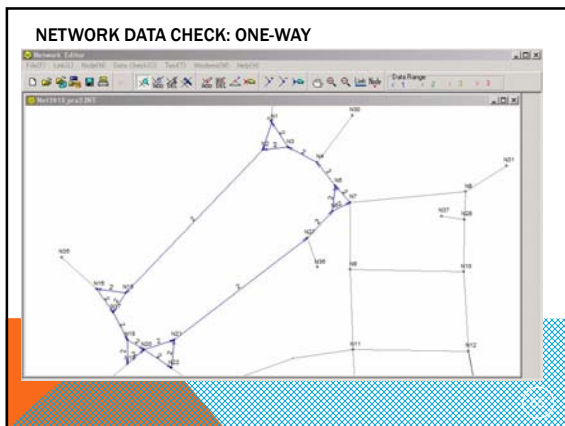
Create node on Network Editor

Create network on Network Editor

- Create line
- Input distance
- One-way regulation
- Link characteristics

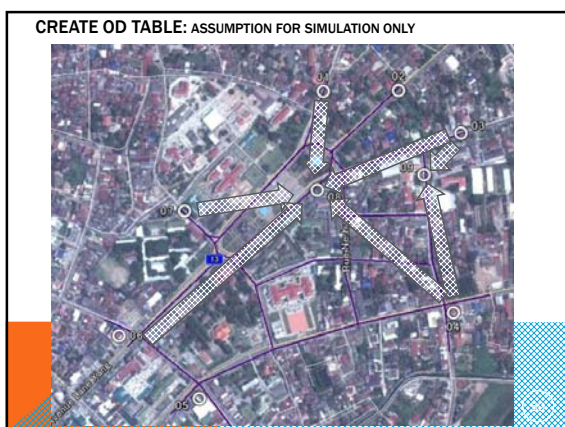
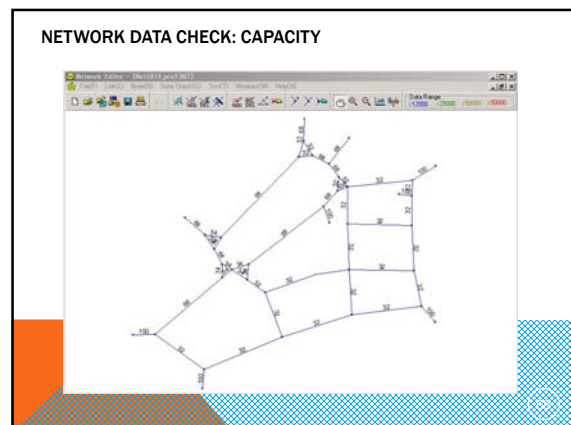
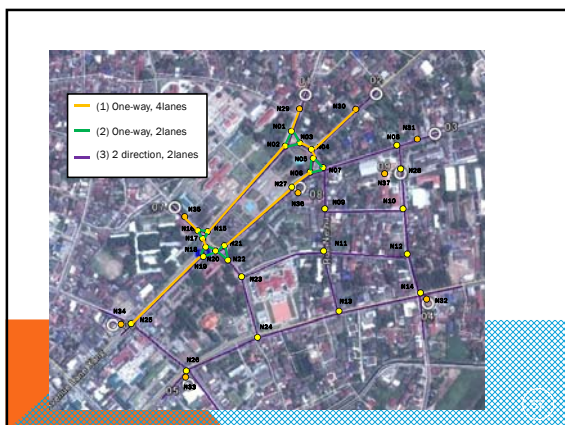
NETWORK: CREATE DRAFT ON GOOGLE EARTH (EXAMPLE)





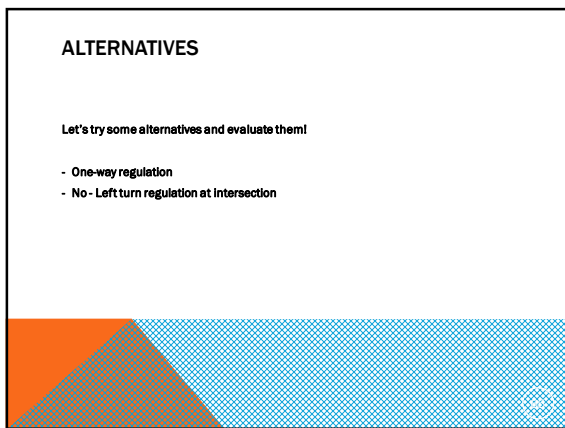
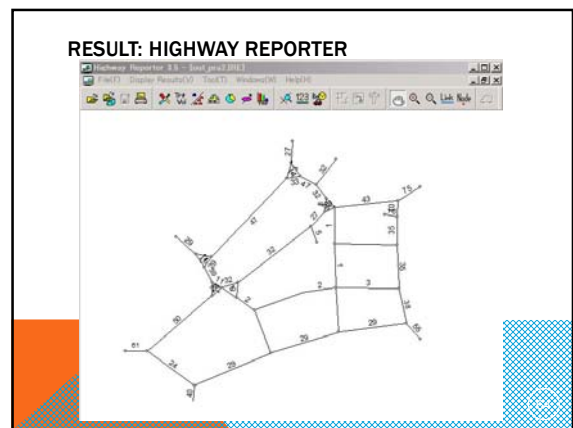
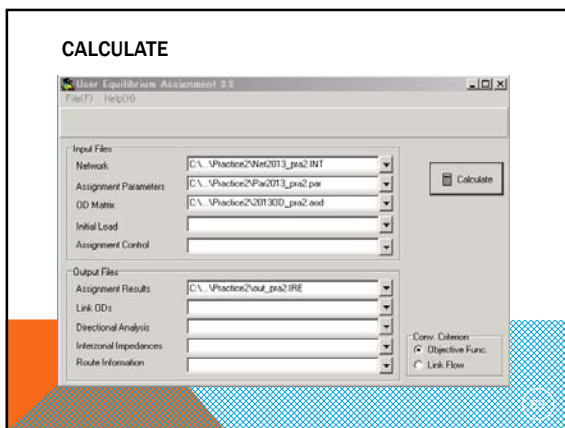
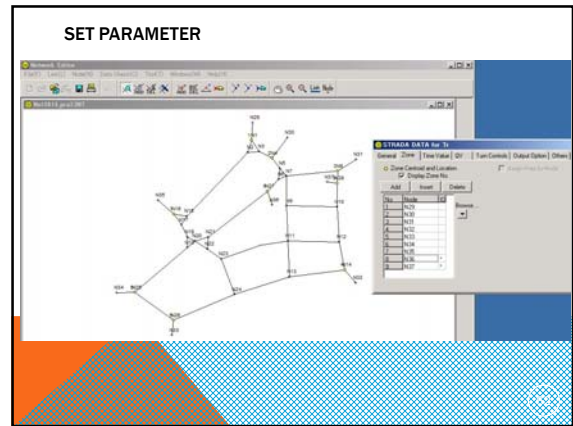
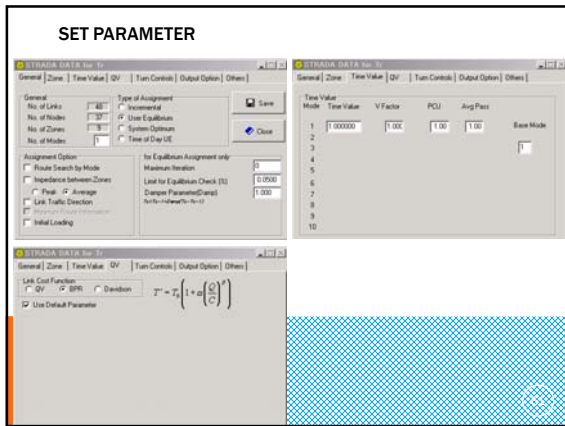
SET CHARACTERISTICS OF LINK

Condition	Vmax (km/h)	Qmax (pcu/h)
(1) One-way, 4lanes (Lane Xang ave.)	50	6,800
(2) One-way, 2lanes	50	3,400
(3) 2 direction, 2lanes	40	3,200



CREATE OD TABLE: ASSUMPTION FOR SIMULATION ONLY

	1	2	3	4	5	6	7	8	9	Total
1	0	0	0	30	50	500	700	50	10	1340
2	800	0	300	10	30	700	500	10	0	2350
3	300	800	0	2000	0	1000	300	40	400	4840
4	0	0	500	0	1000	500	100	20	100	2220
5	100	50	800	800	0	1000	300	10	10	2870
6	100	200	1000	2300	100	0	0	300	100	2000
7	0	0	500	100	100	300	0	70	10	1000
8	0	0	0	0	0	0	0	0	0	0
9	100	0	100	300	0	130	0	0	0	630
Total	1400	650	3000	3240	1200	4130	1000	500	630	16630



Registration

Meeting Topic: 4th Training for JICA STRADA

Place: Computer Room (Faculty of Engineering)

Date: 22nd March 2013

Time: 13:30 - 15:30

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone number	ທີ່ຢູ່ອີເມວ Email Address	ລາຍຊື່ Signature
1	Ms.Amphayvanh KEOPADITH	Officer of Traffic Management and Licese Division	DOT			
2	Mr.Dethmany OANSOUVANH	Officer of Traffic Management and Licese Division	DOT			
3	Mr.Thanongsy DEDVONGSONE	Chief of Domestic Car Transport Division	VCSBE			
4	Mr. Khemphone CHANSUVANH	IT Staff	VCSBE			
5	Mr.Bounsouk SIBOUNTAN	Deputy chief Technical and Workshop Division	VCSBE			
6	Mr. Phongsavanh INTHAVONGSA	Deputy head of transport division	Faculty of Engineering			
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

THE PROJECT TO ENHANCE THE CAPACITY OF VIENTIANE CAPITAL STATE BUS ENTERPRISE

JICA STRADA &
Transportation Demand Forecast
Vol. 3

KUNIMASA Yoshiro

March, 2013

TRAINING PROGRAM

1. Introduction (1 Mar)
2. Outline of Transportation Demand Forecast, Excel practice (7 Mar)
3. Practice 1 : Update Network
Practice 2 : Create Network from beginning (15 Mar)
4. Project Evaluation (22 Mar)

TODAY'S CONTENTS (PROJECT EVALUATION)

1. Objective of Project Evaluation
2. Methodology of Project Evaluation
3. Cost Benefit Analysis
4. Environmental Evaluations

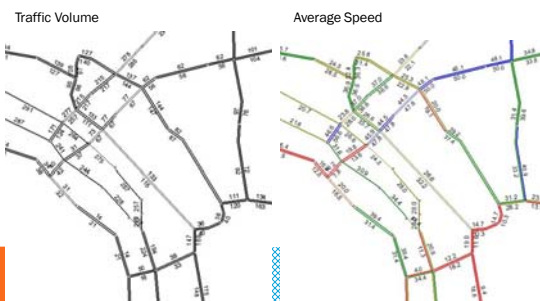
1. OBJECTIVE OF PROJECT EVALUATION

- Project evaluation is to evaluate a planned project would turn out good or bad, especially in terms of a socio-economic aspect.
- It may compare some projects and/ or alternatives.
- Cost benefit analysis is a technique commonly used for public work projects, to evaluate the value of the project comparing to project costs.
- Benefits of transportation projects are derived from alleviation of congestions, reduction of accidents, and improving environment. Travel time and cost saving are main factors for benefits.

2. METHODOLOGY OF PROJECT EVALUATION

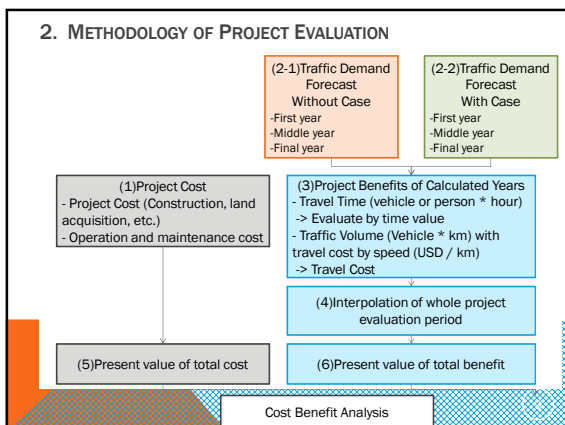
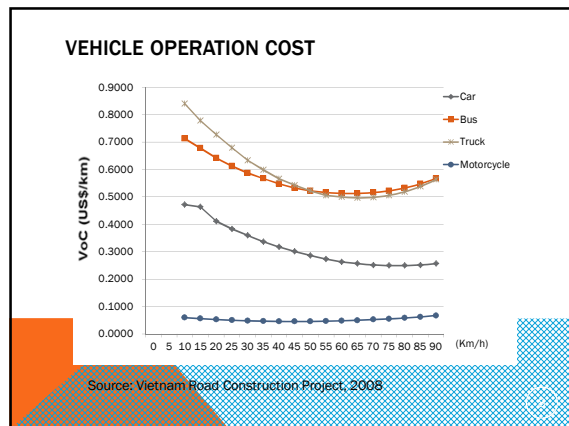
- Benefit is savings of travel time and cost by *With Project* comparing to *Without Project*. Travel time shall be evaluated by time value.
- Cost is construction cost and O&M cost of whole evaluation period. It is to be noted that the cost is not actual price (financial cost) but economic cost, in other words shadow cost or opportunity cost.
- Evaluation period is project useful life time. For instance, road construction projects are 25 to 30 years. In Japan, 50-year is officially defined for road project evaluation.

TRAFFIC ASSIGNMENT RESULTS



TRAFFIC ASSIGNMENT RESULTS

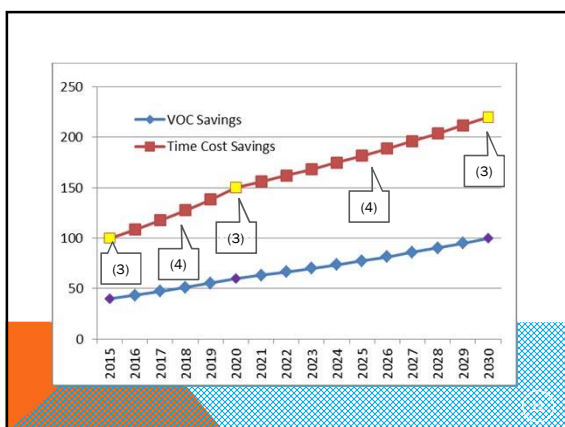
Link	From node	To node	Distance (km)	Vmax (km/h)	Qmax (pcu/day)	Average Speed (km/h)	Final Speed (km/h)	VCR	Volume (Veh/day)
10101	265	86	0.4	50	40000	44.1	27.9	0.64	12888
10201	307	373	0.84	50	40000	48.8	41.9	0.43	8505
10202	373	265	0.66	50	40000	45.6	31.7	0.58	11682
10301	227	307	0.53	50	35200	46.8	35.3	0.53	9312
20101	312	319	0.76	40	8500	29.8	9.4	0.89	3803
20201	319	320	0.52	50	40000	50	50	0.17	3409
20301	320	321	0.34	50	40000	49.7	46.1	0.36	7215
20401	321	322	0.3	50	40000	49.7	46.1	0.36	7215
20501	322	365	0.38	50	40000	50	50	0.22	4452
20601	365	366	0.5	50	40000	50	50	0.22	4452
20602	366	362	0.28	50	40000	50	50	0.22	4452
20701	363	364	0.33	50	24000	28.8	5	1.23	14745
20801	364	322	0.28	50	24000	46.5	34.3	0.54	6532
30101	41	76	0.17	60	72000	57.5	46.6	0.47	17075
30201	76	81	0.13	60	72000	49	23.8	0.77	27892
30301	82	83	0.25	60	72000	54.3	37	0.6	21536
30302	81	82	0.15	60	72000	54.3	37	0.6	21536



PROJECT BENEFIT OF EVALUATED YEAR

- Based on the estimated daily project benefit (ex. 2015, 2020 and 2030), annual benefit is calculated.
- Other years' annual benefits are estimated by interpolations between calculated years' annual benefits.

Year	Costs			Benefits		
	Construction	Costs O&M & Others	Total	VOC Savings	Time Cost Savings	Total
2011	100	100	200	100	100	200
2012	100	100	200	100	100	200
2013	200	100	300	100	100	200
2014	250	100	350	100	100	200
2015	10*	10*	20*	40	100	140
2016	10*	10*	20*	43	108	151
2017	10*	10*	20*	47	118	165
2018	10*	10*	20*	51	128	179
2019	10*	10*	20*	55	138	193
2020	110*	110*	220*	60	150	210
2021	10*	10*	20*	63	156	219
2022	10*	10*	20*	66	162	228
2023	10*	10*	20*	70	168	238
2024	10*	10*	20*	74	175	249
2025	10*	10*	20*	77	182	259
2026	10*	10*	20*	82	189	271
2027	10*	10*	20*	86	196	282
2028	10*	10*	20*	90	204	294
2029	10*	10*	20*	95	212	307
2030	110*	110*	220*	100	220	320



3. COST BENEFIT ANALYSIS

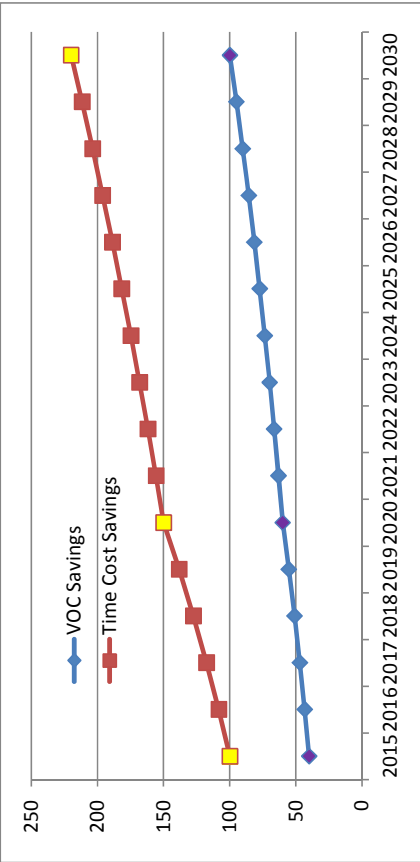
- BCR or B/C**
The ratio that the present value of benefits divided by that of economic costs. Both present benefits and present costs are total amount of discounted values by annual interest rate, through project evaluation period. The ratio should be greater than 1.0 to be a project acceptable.
- Net Present Value (NPV)**
The value subtracted present value of economic costs from that of benefits. The value should be greater than zero to be a project acceptable.
- Economic Internal Rate of Return (EIRR)**
The rate which can be affordable to the project to make them even though total present value of economic costs and that of benefits. In other words, the discount rate which make NPV as zero. The EIRR should be greater than the interest ratio to be a project acceptable.

Economic Internal Rate of Return

Year	Costs			Benefits		Benefits - Costs
	Construction	Costs O&M & Others	Total	VOC Savings	Time Cost Savings	
2011	100		100			-100
2012	100		100			-100
2013	200		200		0	-200
2014	250		250		0	-250
2015		10	10	40	100	130
2016		10	10	43	108	142
2017		10	10	47	118	155
2018		10	10	51	128	169
2019		10	10	55	138	184
2020		110	110	60	150	100
2021		10	10	63	156	209
2022		10	10	66	162	218
2023		10	10	70	168	228
2024		10	10	74	175	238
2025		10	10	77	182	249
2026		10	10	82	189	260
2027		10	10	86	196	272
2028		10	10	90	204	284
2029		10	10	95	212	297
2030		110	110	100	220	210

Economic Internal Rate of Return

Year	Discount Rate: 12%		
	Costs	Benefits	Benefits - Costs
2011	100		-100
2012	89		-89
2013	159	0	-159
2014	178	0	-178
2015	6	89	83
2016	6	86	80
2017	5	83	78
2018	5	81	76
2019	4	78	74
2020	40	76	36
2021	3	71	67
2022	3	66	63
2023	3	61	59
2024	2	57	55
2025	2	53	51
2026	2	49	48
2027	2	46	44
2028	1	43	41
2029	1	40	39
2030	13	37	24



NPV= 392
 EIRR= 20.2%
 BCR= 1.6

Registration Form

Meeting Topic: Training for Using JICA STRADA 3.5

Place: Meeting room, Department of Road-Bridge and Transportation Engineering, Faculty of Engineering, NOUL

Date: 24th February 2014

Time:

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ມາຈາກພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone	ທີ່ຢູ່ເອີເມວ Email Address	ລາຍເຊັນ Signature
1	ທ. ວິໄລ ສິມສັກ	ນັກສູນກຳລັງ ກົມວັດທະນະທຳ ແລະ ສູນກຳລັງ ກົມວັດທະນະທຳ ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	LTC	55682999	yommalath@yahoo.com	
2	ທ. ພິມພິນ ພິມພິນ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55619525	prmpn@yahoo.com	
3	ທ. ວິໄລ ສິມສັກ	ນັກສູນກຳລັງ ກົມວັດທະນະທຳ ແລະ ສູນກຳລັງ ກົມວັດທະນະທຳ ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55614535	vongpackm@yahoo.com	
4	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	9226695	thavone.ksd@hotmail.com	
5	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55552270	atksone.m6@gmail.com	
6	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	553335786	z-phimpho@notuncil.com	
7	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	22230408	Sisouphant@gmail.com	
8	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55620044	elanthavangsy@yahoo.com	
9	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	22240630	phommavong@gmail.com	
10	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55514188	phommavong@gmail.com	
11	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	22229900	deth556@yahoo.com	
12	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55555555	phommavong@gmail.com	
13	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55625122	thavangsy@yahoo.com	
14	ທ. ສິມສັກ ສິມສັກ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	ສຳນັກງານວັດທະນະທຳ ສາທາລະນະ ວຽກງານວັດທະນະທຳ ສາທາລະນະ	55552222	anousath@yahoo.com	
15						
16						
17						
18						
19						
20						

Registration Form

Meeting Topic: Training for Using JICA STRADA 3.5

Place: Meeting room, Department of Road-Bridge and Transportation Engineering, Faculty of Engineering, NOUL

Date: 25th February 2014

Time:

ລ/ດ No.	ຊື່ ແລະ ນາມສະກຸນ Name & Surname	ຕຳແໜ່ງ Position	ນາຈະກາພາກສ່ວນ Organization	ເບີໂທລະສັບມືຖື Telephone	ທີ່ຢູ່ອີເມວ Email Address	ລາຍຊື່ Signature
1	ທ. ທາ. ເຈີ ສີ ເທດອິສະຣາວ.	ຫົວໜ້າອົງການຊ່ວຍເຫຼືອ	ສະຖາບັນ ທາ: ທົ່ວໂລກ ມ. ມ.	85678722	Thavongsy@yahoo	
2	ທ. ສິມພັນ ສິມພັນ	ທ່ານ ພະແນກ	ກົມ ທຳມະຊາດ: ສະໂມສອນ	55514188		
3	ທ. ພິມພັນ ພິມພັນ	ອຳນວຍ	ອຳນວຍ ສາທາລະນະ	55619225	Boranychan@hotmail.com	
4	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ	ອຳນວຍ ສາທາລະນະ	22024100	postnornst@hotmail.com	
5	ທ. ສິມພັນ ພິມພັນ	ທ່ານ ພະແນກ ທຳມະຊາດ: ສະໂມສອນ	LIEC	55682994	xommalat@yahoo.com	
6	ທ. ວິຈິນ ວິຈິນ	ທ. ພະ ສະໜອງ ສະໜອງ	PTI	55614535	vongackm@yahoo.com	
7	ທ. ສິມພັນ ພິມພັນ	ທ່ານ ພະແນກ ທຳມະຊາດ: ສະໂມສອນ	ສະຖາບັນ ທາ: ທົ່ວໂລກ ມ. ມ.	85620014	chenliava@yahoo.com	
8	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ	ອຳນວຍ ສາທາລະນະ	2236695	thavome.kss@hotmail.com	
9	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ / ພະແນກ	ກົມ ສູນຄຸນ	22240630	phommavong@gmail.com	
10	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ ສາທາລະນະ	ສະຖາບັນ ທາ: ທົ່ວໂລກ ມ. ມ.	55552270	aksone.m64@gmail.com	
11	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ	ອຳນວຍ ສາທາລະນະ	55444837		
12	ທ. ສິມພັນ ພິມພັນ	ອຳນວຍ	ອຳນວຍ ສາທາລະນະ	5677722	unusakth@yahoo.com	
13						
14						
15						
16						
17						
18						
19						
20						