

ANNEX A. INCREMENTAL COST AND CO-FINANCING

Incremental Costs and Benefits Table

Project Component	Baseline (B)	Alternative (A)	Increment (B-A)
Global Benefits	Steadily increasing private motor vehicle ownership and increasing trip distances from urban sprawl generate rapidly increasing GHG emissions from urban transport. t CO2eq reduced/year: 132,000 Cost: \$32,400,000	Bus rapid transit effectively implemented together with pedestrian/non-motorized improvements and demand management, provides a model for slowing and eventually reversing growth in GHG emissions from urban transport. t CO2eq reduced/year: 1,688,000 Cost: \$200,907,000	Slowing and eventual reversal of current trends. t CO2eq reduced/year: 1,556,000 Cost: \$168,507,000 Cost to GEF: \$5,812,000
Local Benefits	Unhealthy air quality levels shifting from particulates, hydrocarbons and CO to nitrous oxides and ozone as vehicle technology improves. Severe congestion hinders economy. Deaths and injuries from vehicle crashes continue to climb. Busy streets sever communities.	Reduction in km traveled by private motor vehicles reduces local pollutant levels, increase safety. Congestion reduced by demand management. Pedestrian enhancements and transit oriented developments restore walking and community life.	Lower local pollution levels. Reduced congestion. Improved safety. Reduced trip lengths.
Objective 1: Develop BRT Corridors 4-14	6 BRT corridors implemented by year 2. Sub-optimal implementation means a significant % of public transit users find standard routes more convenient. BRT lanes removed by year 5 t CO2eq reduced/year: 132,000 Cost: \$32,400,000	All 14 routes completed within 5 years. Routes optimized to achieve maximum demand. t CO2eq reduced/year: 264,000 Cost: \$72,885,000	14 optimized BRT routes t CO2eq reduced/year: 132,000 Cost: \$40,485,000 Cost to GEF: \$606,000

Project Component	Baseline (B)	Alternative (A)	Increment (B-A)
Objective 2: Optimize Fare System for Corridors 1-14	Non-integrated fare system with inadequate controls results in fare leakage and continue use of non-competitive bids for BRT operation Cost: \$0	Integrated fare system with controls stops fare leakage. Competitive contracting implemented for BRT bus operation, reducing costs t CO2eq reduced/year: 46,000 Cost: \$46,003,000	Integrated fare system with competitive contracting. t CO2eq reduced/year: 46,000 Cost: \$46,003,000 Cost to GEF: \$826,000
Objective 3: Improve Intersection Performance	Intersections continue to cause conflicts that increase with system expansion, slowing average BRT speed to 18 km/hr Cost: \$0	Intersection conflicts reduced to acceptable levels. BRT average speed increases to 25km/hr t CO2eq reduced/year: 52,000 Cost: \$31,247,000	Reduced intersection conflicts. 7km/hr BRT speed increase. t CO2eq reduced/year: 52,000 Cost: \$31,247,000 Cost to GEF: \$524,000
Objective 4: Optimize Busway Operation	BRT buses bunch during operation. 1-door bus and station design slow boarding/alighting. Crowded conditions limit passengers. Cost: \$0	Operation optimized to maximize service to passengers and reduce waiting and transfer times. t CO2eq reduced/year: 64,000 Cost: \$33,223,000	Additional doors in buses and stations; other optimizations. t CO2eq reduced/year: 64,000 Cost: \$33,223,000 Cost to GEF: \$693,000
Objective 5: Improve public perception of BRT	No source of information on best route for point-to-point service by public transport. Cost: \$0	Web and SMS based routing information system available to potential passengers. t CO2eq reduced/year: 42,000 Cost: \$1,155,000	Public information t CO2eq reduced/year: 42,000 Cost: \$1,155,000 Cost to GEF: \$890,000
Objective 6: Rationalize Non-BRT Bus Routes	5% of BRT passengers from bus feeder services and 20% from PVM feeder	50% of BRT passengers from bus feeder service; 32% of which are new passengers and 32% shifted from PMV feeder	New bus routes.

Project Component	Baseline (B)	Alternative (A)	Increment (B-A)
	Cost: \$0	t CO2eq reduced/year: 121,000 Cost: \$1,377,000	t CO2eq reduced/year: 121,000 Cost: \$1,377,000 Cost to GEF: \$867,000
Objective 7: Evaluate and Implement Transport Demand Management Measures to Reduce Private Motor Vehicle Use	3-in-1 system continues to operate Cost: \$0	TDM measure implemented so that cost of PMV use is greater than BRT fare t CO2eq reduced/year: 913,000 Cost: \$5,687,000	TDM charging measure t CO2eq reduced/year: 913,000 Cost: \$5,687,000 Cost to GEF: \$667,000
Objective 8: Improve Pedestrian, NMT Facilities and Land Use in Center and Along Corridors	Poor pedestrian facilities throughout Jakarta; Inconvenient pedestrian NMT connecting trip to BRT forces increased use of private car and tax Cost: \$0	Convenient NMT and pedestrian trips increases overall use of BRT and NMT connecting modes t CO2eq reduced/year: 39,000 Cost: \$1,887,000	NMT and pedestrian facilities t CO2eq reduced/year: 39,000 Cost: \$1,887,000 Cost to GEF: \$489,000
	No public transport, pedestrian or NMT improvement Cost: \$0	t CO2eq reduced/year: 15,000 Cost: \$250,000	1 BRT or increased walk/bike trips t CO2eq reduced/year: 15,000 Cost: \$250,000 Cost to GEF: \$250,000

ANNEX B. LOGFRAME MATRIX

Objective / Outcome	Output	Verifiable Indicators	Means of Verification	Assumptions	Risks
Overall Goal: Maximize effectiveness of the Jakarta BRT and use it as a catalyst for urban transport reform in Jakarta and other key Indonesian cities.					
Goal A: Improve Performance of the Jakarta BRT					
Objective 1: Develop BRT Corridors 4-14					
Outcome: BRT implemented on corridors 4-14 with routes optimized	600,000 additional BRT Passenger Trips per day	BRT system ridership	BRT system gate entry counts, computer tabulated	Optimum routing will increase system ridership, improving modal shift to BRT	Political and social considerations could prevent giving BRT exclusive right-of-way in some narrow road segments if public and political support for BRT is insufficient.
	263,000 t CO2eq reduced per year	Fuel Consumption, passenger-km	Fueling records; fuel consumption verification tests		
Objective 2: Optimize Fare System for Corridors 1-14					
Outcome: Integrated fare system with controls stops fare leakage. Competitive contracting implemented for BRT bus operation, reducing costs	105,000 additional BRT passengers per day	Per-km payment amount to BRT operators.	Operator contracts	Improved passenger flow and comfort in stations will increase ridership.	Private contractors may be resistant to a transparent contracting process if public and political will are insufficiently clear.
	46,000 t CO2eq reduced per year	BRT system Fuel consumption, passenger-km	Fueling records; data above	50% price elasticity of demand; Objective 1 achieved	
Objective 3: Improve Intersection Performance for BRT					

Objective / Outcome	Output	Verifiable Indicators	Means of Verification	Assumptions	Risks
Outcome: Intersection conflicts reduced to acceptable levels. BRT average speed increases to 25km/hr; improved political support for BRT by reducing impacts on mixed traffic	5km/hr BRT average speed increase	BRT average speed	Velocity Surveys	More efficient solutions can be identified for problem intersections along the BRT corridors.	Concern for mixed traffic flow could prevent prioritizing BRT flow if public and political support for BRT is insufficient.
	BRT Passengers increases by 118,000/day	BRT system ridership	BRT system gate entry counts, computer tabulated	Objective 1 & 2 achieved; 50% price elasticity of demand	
	52,000 t CO ₂ eq reduced per year	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Objective 4: Optimize Busway Operation					
Outcome: Increased average speed of BRT, 5% reduction of fleet downtime, reduced operating costs; 8% reduction in fuel consumption	average speed of BRT improves from 25 to 28 km/hour	Average travel time for various O-D points on BRT system.	Velocity surveys		Negligible, as all changes increase efficiency and reduce total costs.
	133,000 additional BRT passengers/day	BRT system ridership	BRT system gate entry counts, computer tabulated	50% price elasticity of demand; avg 70 buses/route running 600km/day each; Objective 1-3 achieved	

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	64,000 t CO ₂ eq reduced per year	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Objective 5: Improve public perception of BRT					
Outcome: Public understanding of BRT and optimal use of public road space increased. Web and SMS based routing information system available to potential passengers.	96,000 additional BRT passengers/day	BRT system ridership	BRT system gate entry counts, computer tabulated	Specific information on customer-selected point-to-point travel will increase system ridership by 10%; Objectives 1-4 achieved	BRT customers may not have affordable internet or telephone access to routing information system.
	42,000 (t CO ₂ eq reduced per year	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Goal B: Utilize BRT to Improve Public Transport, Pedestrian/NMT, and Land Use					
Objective 6: Rationalize Non-BRT Bus Routes					
Outcome: Increase of passenger from bus feeder system from 5% to 13% of BRT passengers; of which 32 % are new passengers and 32 % shifted from PMV feeder, reducing	200% increase in BRT passengers using bus feeder	Total bus route km. Average bus occupancy.	Itinerary surveys. On-board O-D surveys.	Routes can be improved to both better serve customers and increase operator income. Objective 1-5 Achieved; 20% of BRT trips	Political obstacles to bus route reform and corrupt routing practices could prevent significant change unless public and political involvement is sufficient to demand reform of the process.
	50% reduction in BRT passengers using private motor vehicle as feeder; 250,000 fewer PMV km per day	PMV feeder trips	BRT passenger surveys		

Objective / Outcome	Output	Verifiable Indicators	Means of Verification	Assumptions	Risks
PMV feeder trips and increasing total BRT passengers	1,050,000 fewer private motor vehicle feeder trips per day	BRT system ridership	BRT system gate entry counts, computer tabulated	have PMV feeder with average trip distance of 8km	
	114,000 t CO2eq reduced per year	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Objective 7: Evaluate and Implement Transport Demand Management Measures to Reduce Private Motor Vehicle Use					
Outcome: TDM measure implemented so that cost of PMV use is greater than BRT fare	TDM charge for operating PMV on congested portions of BRT corridors	Existence of pricing scheme.	Charging counts, tabulated by computer	Increased price for driving private motor vehicles during peak hours will cause modal shift to BRT and other less energy intensive modes. Objective 1-6 achieved	Public resistance to paying more for driving may prevent implementation; inclusion of motorcycles could be technically difficult.
	720,000 additional BRT passengers per day	BRT system ridership	BRT system gate entry counts, computer tabulated		
	Doubling of passengers from PMV from 25% to 50%	PMV feeder trips	BRT passenger surveys		
	913,000 t CO2eq reduced per year	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Objective 8: Improve Pedestrian, NMT Facilities and Land Use in Center and Along Corridors					

Objective / Outcome	Output	Verifiable Indicators	Means of Verification	Assumptions	Risks
Outcome: Convenient NMT and pedestrian trips increases BRT trips to do pedestrian ease; increased feeder trips by bicycle	Additional BRT passengers from pedestrian and bike connections	BRT passengers coming from pedestrian and bicycle.	Pedestrian activity measurements. BRT bike parking lot occupancy counts. BRT customer surveys of mode used to get to BRT station.	Improved pedestrian and NMT facilities will increase the length and frequency of pedestrian/NMT trips enough to displace more energy intensive modes. Objective 1-7 achieved; 20% of BRT trips have PMV feeder with average trip distance of 4km PMV feeder trips cut in half; remaining trips average 5km	Pedestrian facilities may not be attractive enough to increase pedestrian trips if there is insufficient private investment in the area.
	246,000 fewer PMV kms as feeder and short-distance trips	PMV feeder trips	BRT passenger surveys		
	39,000 t CO2eq reduced per year.	Fuel consumption, passenger-km	Fueling records; fuel consumption verification tests; data above		
Objective 9: Dissemination and Outreach to Other Cities					
Outcome: Full BRT implemented in 1 of target cities; BRT draws some passengers from private motor vehicles. Or increased number of	32,000 additional daily trips by public transit,	Public transit ridership in target cities. BRT capacity, average speed, ridership figures.	Frequency and visual occupancy surveys. BRT system fare entries.	The physical example of Jakarta's BRT will inspire efforts to replicate it.	Poorly implemented BRT systems could degrade the image of BRT if technical assistance is insufficient.

Objective / Outcome	Output	Verifiable Indicators	Means of Verification	Assumptions	Risks
Or increased number of students walking and biking to school increased use of bicycle for short trips	or 150,000 fewer short trip motorcycle km per year	Bicycle and pedestrian trips among students and other target groups.	Bicycle traffic counts. Pedestrian activity surveys. Intercept survey on previous mode.	1% shift to walk or NMT. 10,000 short pass trips/day in focus areas, 2km/trip;	Concerns about vehicle congestion may prevent allocation of road space to pedestrians or NMT.
	15,000 t CO ₂ eq reduced per year	BRT fuel consumption, passenger-km	Fueling records; fuel consumption verification test and surveys of drivers; data above		
		Motorcycle fuel consumption.	Fuel consumption measurements. Traffic counts.		

ANNEX C: STAP REVIEW

REVIEW OF PROJECT “BUS RAPID TRANSIT AND PEDESTRIAN IMPROVEMENTS IN JAKARTA AND OTHER INDONESIAN CITIES”

For the Global Environment Facility
Lew Fulton, UNEP, Project Contact Person

By

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March 13, 2006

The format of my review

In following I refer to paragraph numbers in the draft version of the proposal sent to me as a Word file (“UNEP Indonesia GEF OP-11 FSP brief – draft 13mar06.doc”) by Lew Fulton in March.

General remarks

This version is considerably improved over the pdf-b version, which I also read. All in all, I think that this is one of the most savvy GEF transportation projects I've reviewed.

The BRT and pedestrian projects are good ideas, generally.

Because the eight listed objectives for Jakarta and the objectives for Yogyakarta and the other cities are the items that Indonesia wants GEF to help pay for, they perhaps should be delineated a little more fully and clearly, and to the extent possible should be discussed all in one place. Ideally, each objective should be described in detail, with all of the available technical analysis, all in one place (as opposed to in different parts of the document) and adhering to the same general format. More specifically, each objective could be linked a little more closely with the two “cases” (the no-project baseline and the with-project scenario). Approximate timelines for each objective could be added. To accomplish this, information could be taken from the incremental cost matrix and project time line and added to the detailed description of objectives and activities.

Specific comments.

1. and 2. The document should provide a little more quantitative information on air pollution levels, contributions to pollution of the transport sector by mode and pollutant, characteristics of the vehicle fleet, and general demographics (income, age, housing density, etc.).

It seems plausible to me that in a city such as Jakarta, BRT, TDM, and NMT are among the best transportation alternatives. Of course, it also is important to integrate transportation projects, policies, and plans with land-use planning and broader economic policies, and I see that later in the document this is recognized.

2. and 3. Details and references for data on congestion and air pollution costs should be provided.

5. The political and institutional commitment to improving the transportation system seems genuine, and augurs well for the success of the projects. Indonesia does indeed seem committed to improving its transportation systems. That the governor not only supports BRT but actually instigated it means that the all-important political and institutional backing is likely to remain quite strong.

12. to 21. The arguments for international aid to fix problems with the first BRT line and to ensure the successful completion of the second and third lines seem compelling. Similarly, near-term international aid and expertise probably is better directed to BRT than to building a metro.

17. to 20. The baseline scenario is a little dire but not implausible. In any event, the proposal to optimize BRT first, and do metro later if warranted is sensible.

General comments on objectives for Yogyakarta. The various objectives are a good start, but I think that a couple should be more thought out, and that at least one should be added. First, there should be more details on the plan to price or reform parking in the city center, because I gathered that the main “motor-vehicle” problem is motor scooters, and to the casual observer it would seem to be rather difficult to control the parking of scooters and mopeds. Second, while the desire to resuscitate the becak is admirable socially and environmentally, it seems like it *may* be unrealistically economically – unless there are huge subsidies, which might not be justifiable from a social-welfare standpoint. Third, while it is true that NMT and high occupancy BRT has lower GHG emissions per passenger mile than do motor scooters, the scooters have much lower GHG emissions than do any other form of personal motorized transport. The real problem with scooters is high PM, VOC, and CO emissions (and maybe high noise levels), but there are ways to reduce all of these significantly. The point is that it would be wise to recognize that the scooters are an inexpensive, flexible, low-GHG form of private transport, and to take steps to minimize their pollution and noise levels.

The claims that improved pedestrian facilities will increase transit demand significantly ought to be quantified and substantiated as much as possible.

65. to 67. I wouldn't necessarily agree that the key transport problem is subsidizing motor-vehicle use, and in any event, BRT policies and projects do not *directly* address subsidies to motor vehicles. But this is a quibble.

99. The remark about a congestion charging regime correcting "distortions in travel demand" is flip, given the difficulties in designing, implementing, and modeling the impacts of congestion pricing (a topic about which there must be over 1000 papers and reports written by now...)

GHG emissions calculations, general comments. In this section I discuss several ways to improve the calculation of incremental GHG emissions reductions associated with the various project activities.

The single most important part of the estimation of the incremental GHG emission changes associated with BRT projects and policies is to have a good travel demand/mode choice model that covers all of the relevant modes and trip purposes. This model would be run once for a baseline scenario to generate baseline travel by mode (for all modes and trips), and then run for a BRT-change scenario to generate a new set of travel data (all modes and trips). Ideally, this model would be able to estimate the effect of changes in BRT fares and would provide a better estimate than just assuming a 50% price elasticity of demand (e.g., paragraph 125). The baseline scenario would be calibrated with the travel survey data already collected.

In the classic, ideal evaluation process, the results of each model run feed back to project specification: after each run, the project is redesigned (on the basis of the output of the travel demand/mode choice model) to increase ridership and reduce costs. This is done until one believes that one has something close to the "optimal" design for the available budget. This optimal design should have a clear specification of the number of buses and their duty cycles.

After one has settled on the "optimal" BRT-project specification, the next step is to estimate the GHG emissions impact of the difference in travel between the baseline and the optimal BRT-project. In essence, this can be done by multiplying changes in VMT by lifecycle GHG emissions factors per VMT, by mode.

Lifecycle emission factors comprise four parts: end-use emissions, "upstream" fuelcycle emissions, vehicle lifecycle emissions, and infrastructure-construction emissions. End-use emissions should be estimated on the basis of measured or locally estimated fuel use and emission-factor data. Upstream emissions and vehicle lifecycle emissions can be estimated with tools such as my Lifecycle Emissions Model (LEM), specified with local energy-use and emission-factor data wherever possible. Special attention should be paid to estimating upstream and vehicle lifecycle emissions for bus operations. The lifecycle emission factors should include

emissions from the lifecycle of the vehicle itself (materials lifecycle, vehicle assembly, etc.), as well as emissions from the lifecycle of fuels, because changes in vehicle usage generally cause changes in vehicle replacement intervals (although the relationship is not necessarily straightforward). Infrastructure-construction emissions can be calculated on the basis of studies that estimate energy and material inputs to generic classes of infrastructure (e.g., underground subway),.

Ideally, the GHG emission measure would be the CO₂ equivalent of all emitted species, as is done in the LEM. I recognize, though, that GEF may have different guidelines, such as CO₂ only, or CO₂ plus CH₄ and N₂O weighted by their “official” IPCC GWPs.

There is one other consideration. The incremental GHG emissions impact (or any impact) of the different activities should be estimated either sequentially, starting with what is thought to be the most cost effective, or else all at once. It is not correct to estimate each activity with respect to the baseline, and then add the resulting differences together.

137 on, Risks and Sustainability. The discussions of sustainability, risks, and replicability are thoughtful.

164 on, Monitoring and Evaluation. If a primary objective of the projects is to reduce GHG emissions, then the monitoring and evaluation activities ought to focus on gathering the data needed to perform system-wide GHG emissions calculation. Many and perhaps most of these data are mentioned in Table 7, which is an excellent start. Ideally, there would be a comprehensive program to gather data on emissions of all pollutants from all major modes under a variety of driving conditions, and on use of all sources of energy by vehicles, buildings, facilities, maintenance and repair yards, and so on.

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Response: The Project Activities section has been updated to include a brief description of the government’s activities, and a summary of the baseline and project scenarios for each objective. The milestones and completion dates from the project timeline have been added at the end of the description of activities for each objective.

Specific comments.

1. and 2. The document should provide a little more quantitative information on air pollution levels, contributions to pollution of the transport sector by mode and

pollutant, characteristics of the vehicle fleet, and general demographics (income, age, housing density, etc.).

Response: additional information on air pollution has been added to paragraph 3. Emissions data for Jakarta and other Indonesian cities is of poor quality and in some cases unavailable. During the project, we hope to develop a cooperative arrangement with Swisscontact and the Indonesian Clean Air Coalition (Mitra Emisi Bersi) to collect both improved statistical information and a better assessment of emission factors for Indonesian vehicles. Tables and description have been added to the Background section, pages 1-2, showing vehicle fleet composition and some general demographic information.

It seems plausible to me that in a city such as Jakarta, BRT, TDM, and NMT are among the best transportation alternatives. Of course, it also is important to integrate transportation projects, policies, and plans with land-use planning and broader economic policies, and I see that later in the document this is recognized.

2. and 3. Details and references for data on congestion and air pollution costs should be provided.

Response: Available detail on air pollution costs is included on page 1, paragraph 3, and the reference has been added. Paragraph 5, page 2, gives available data on congestion costs, with reference.

5. The political and institutional commitment to improving the transportation system seems genuine, and augurs well for the success of the projects. Indonesia does indeed seem committed to improving its transportation systems. That the governor not only supports BRT but actually instigated it means that the all-important political and institutional backing is likely to remain quite strong.

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justifiable from a social-welfare standpoint. Third, while it is true that NMT and high occupancy BRT has lower GHG emissions per passenger mile than do motor scooters, the scooters have much lower GHG emissions than do any other form of personal motorized transport. The real problem with scooters is high PM, VOC, and CO emissions (and maybe high noise levels), but there are ways to reduce all of these significantly. The point is that it would be wise to recognize that the scooters are an inexpensive, flexible, low-GHG form of private transport, and to take steps to minimize their pollution and noise levels.

Response: We agree that motorcycles provide a form of transportation with very low GHG emissions. However, the sustainability of this mode is questionable because of the safety risks to passengers including small children. We have focused on transforming excessive motorcycle trips – such as trips on University campuses and short trips in business districts – into walking or NMT trips.

Efforts to reduce the emissions of motorcycles have been successful in cities such as Bangkok, where manufacturers have responded to government pressure to reduce emissions. The results are beneficial to the health of all urban residents. We would support an effort to set more stringent emissions standards for motorcycles. However, this is not within ITDP's area of expertise and is better suited for inclusion in other projects (e.g. by Swisscontact and Mitra Emisi Bersi) already ongoing in Indonesia. We do not feel it should be a component of this project, which is focused on achieving modal shift toward public transit and pedestrian/NMT.

Regarding the second point, the becak modernization already completed has produced a vehicle with improved design but utilizing local materials, tools and labor, so that the cost is competitive with existing becaks. Initial design expertise was funded by the Toyota Foundation. No ongoing subsidy is required.

Regarding the first point about motorcycle parking, we strongly agree. Controlling parking would provide perhaps the most practical way to manage demand for motorcycle trips. We have worked extensively in this area with Intran in Yogyakarta. Motorcycle parking there is highly controlled by a network of parking attendants at all major destinations. A small fee is collected and uncontrolled parking in these areas does not occur. A challenge, though, is that much of the parking revenue is controlled by an informal enforcement sector outside of normal government channels. Nevertheless, we agree this may be a more practical form of TDM for both cars and motorcycles in the other cities. A sentence has been added to clarify this for Objective 12 in the description of Project Activities.

We have added elements of this response to the proposal.

The claims that improved pedestrian facilities will increase transit demand significantly ought to be quantified and substantiated as much as possible.

Response: Unfortunately, we have found no quantitative data that can be used. We have revised the GHG calculations for Objective 8 to consider only an estimated reduction in short motorized vehicle feeder trips. All estimates used will be revised as part of the project efforts

for assessment of the transportation system and the monitoring and evaluation of GHG impacts.

65. to 67. I wouldn't necessarily agree that the key transport problem is subsidizing motor-vehicle use, and in any event, BRT policies and projects do not *directly* address subsidies to motor vehicles. But this is a quibble.

Response: We agree that BRT does not address the issue of underlying subsidies for private motor vehicles. However, it does re-allocate some of the publicly provided road space in Jakarta away from motor vehicles and towards public transportation. Further, BRT makes it more feasible for Jakarta to implement TDM measures by providing a fast, comfortable alternative mode to driving. TDM measures, specifically road pricing and congestion charging, are able to directly address subsidies. The feasibility of such measures will be explored in the project.

99. The remark about a congestion charging regime correcting "distortions in travel demand" is flip, given the difficulties in designing, implementing, and modeling the impacts of congestion pricing (a topic about which there must be over 1000 papers and reports written by now...)

Response: This is a valid criticism. The sentence has been reworded to reflect road-pricing's usefulness as a tool to manage demand. It is worth noting that with the successful implementation of the congestion charge system in London, many more cities are now looking closely at this option. Stockholm has just announced it will implement a similar system. In Asia, Singapore provides a successful example that Jakarta can draw upon.

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design for the available budget. This optimal design should have a clear specification of the number of buses and their duty cycles.

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Lifecycle emission factors comprise four parts: end-use emissions, “upstream” fuelcycle emissions, vehicle lifecycle emissions, and infrastructure-construction emissions. End-use emissions should be estimated on the basis of measured or locally estimated fuel use and emission-factor data. Upstream emissions and vehicle lifecycle emissions can be estimated with tools such as my Lifecycle Emissions Model (LEM), specified with local energy-use and emission-factor data wherever possible. Special attention should be paid to estimating upstream and vehicle lifecycle emissions for bus operations. The lifecycle emission factors should include emissions from the lifecycle of the vehicle itself (materials lifecycle, vehicle assembly, etc.), as well as emissions from the lifecycle of fuels, because changes in vehicle usage generally cause changes in vehicle replacement intervals (although the relationship is not necessarily straightforward). Infrastructure-construction emissions can be calculated on the basis of studies that estimate energy and material inputs to generic classes of infrastructure (e.g., underground subway),.

Ideally, the GHG emission measure would be the CO₂ equivalent of all emitted species, as is done in the LEM. I recognize, though, that GEF may have different guidelines, such as CO₂ only, or CO₂ plus CH₄ and N₂O weighted by their “official” IPCC GWPs.

Response: These are excellent suggestions. The project includes utilization of the existing public transport demand model developed by the Project Team, and the development of a full multi-modal transport demand model. There is also a permanent survey team directed by a Research Coordinator that will be providing regular information to improve the model. Based on your suggestions, we now include the utilization of the model outputs to run an emissions model. A key factor here will be the determination of appropriate lifecycle emission factors. During the PDF-B we were unable to find any suitable factors. The GHG emissions estimates are made using factors developed for Latin America, which we estimate has a similar vehicle fleet.

As the GHG emission estimation is critical to the Monitoring and Evaluation process, we will pursue improvement of the emissions model during the execution of the project. A flow diagram has been added to the Monitoring and Evaluation section to show the processes and information flow for development of the GHG emissions estimates.

There is one other consideration. The incremental GHG emissions impact (or any impact) of the different activities should be estimated either sequentially, starting with what is thought to be the most cost effective, or else all at once. It is not correct

to estimate each activity with respect to the baseline, and then add the resulting differences together.

Response: GHG emissions for Goals A & B (Jakarta) have been estimated sequentially. The order is based primarily on how we expect the project to proceed, which considers both what activities are most cost effective and politically practical to implement. We have less data about the other cities, and have attempted to avoid double counting by assuming the projects will affect different cities, or different parts of the same city. If one city implements more than one objective, producing related changes in total GHG emissions, error associated with comparing each activity to the baseline should be small.

137 on, Risks and Sustainability. The discussions of sustainability, risks, and replicability are thoughtful.

164 on, Monitoring and Evaluation. If a primary objective of the projects is to reduce GHG emissions, then the monitoring and evaluation activities ought to focus on gathering the data needed to perform system-wide GHG emissions calculation. Many and perhaps most of these data are mentioned in Table 7, which is an excellent start. Ideally, there would be a comprehensive program to gather data on emissions of all pollutants from all major modes under a variety of driving conditions, and on use of all sources of energy by vehicles, buildings, facilities, maintenance and repair yards, and so on.

Response: As mentioned in the response to the “GHG Emissions Calculations – General Comments” above, a flow chart has been added to the Monitoring and Evaluation section to better depict the data gathering and modeling process. During the initial stages of the project, the Monitoring and Evaluation plan will be further developed and finalized. We will seek to include the suggestions made here into the monitoring and evaluation process.

ANNEX D. GHG IMPACT CALCULATIONS

Objective	Baseline	Project
Objective 1: Develop BRT Corridors 4-14		
Outcome	6 BRT corridors implemented by year 2. Sub-optimal implementation means a significant % of public transit users find standard routes more convenient. BRT lanes removed by year 5	All 14 routes completed within 5 years. Routes optimized to achieve maximum demand.
BRT Passenger Trips per day	240,000	840,000
GHG Reduced per year (t CO ₂ eq)	105,469	264,000
Specific Assumptions:	Average 40,000 trips/day/corridor.	Average 60,000 trips/day/corridor. GHG reduction shown are in addition to Baseline
Objective 2: Optimize Fare System for Corridors 1-14		
Outcome	Non-integrated fare system with inadequate controls results in fare leakage and continue use of non-competitive bids for BRT operation	Integrated fare system with controls stops fare leakage. Competitive contracting implemented for BRT bus operation, reducing costs
Additional BRT Passenger Trips per day	0	105,000
GHG Reduced (t CO ₂ /year)	0	46,000
Specific Assumptions:		Fare price reduced by 25%. Objective 1 activities implemented. 50% price elasticity of demand.
Objective 3: Improve Intersection Performance		
Outcome	Intersections continue to cause conflicts that increase with system expansion, slowing average BRT speed to 18 km/hr	Intersection conflicts reduced to acceptable levels. BRT average speed increases to 25km/hr
Additional BRT Passenger Trips per	0	118,000

Objective	Baseline	Project
day		
GHG Reduced (t CO2/year)	0	52,000
Specific Assumptions:		Objective 1 & 2 activities implemented. Higher operating speed reduces cost and fare level resulting in 12.5% increase in trips.
Objective 4: Optimize Busway Operation		
Outcome	BRT buses bunch during operation. 1-door bus and station design slow boarding/alighting. Crowded conditions limit passengers.	Operation optimized to maximize service to passengers and reduce waiting and transfer times.
Additional BRT Passenger Trips per day	0	133,000
GHG Reduced (t CO2/year)	0	64,000
Assumptions:		Objective 1,2, & 3 activities implemented. Reduced downtime and waiting time at stations allows reducing fare price by 25%. 50% price elasticity.
Objective 5: Improve public perception of BRT		
Outcome	No source of information on best route for point-to-point service by public transport.	Web and SMS based routing information system available to potential passengers.
Additional BRT Passenger Trips per day	0	96,000
GHG Reduced (t CO2/year)	0	42,000
Assumptions:		Objective 1-4 activities implemented; Information system results in 8% ridership increase
Objective 6: Rationalize Non-BRT Bus Routes		
Outcome	5% of BRT passengers from bus feeder services and 20% from	50% of BRT passengers from bus feeder service;

Objective	Baseline	Project
	PVM feeder	32% of which are new passengers and 32% shifted from PMV feeder
% BRT using BUS feeder	5%	50%
% BRT using PMV feeder	20%	14%
Total BRT trips per day	240,000	1,290,000
Reduction in motorized connecting trip kms	288,000	1,054,000
GHG Reduced (t CO2/year)	0	121,000
Assumptions:	Average feeder trip distance of 6km round-trip per BRT trip	Objective 1-5 Activities implemented; 13.6% of BRT trips have PMV feeder with average of 6km per BRT trip
Objective 7: Evaluate and Implement Transport Demand Management Measures to Reduce Private Motor Vehicle Use		
Outcome	3-in-1 system continues to operate	TDM measure implemented so that cost of PMV use is greater than BRT fare
Additional BRT Passenger Trips per day	0	720,000
GHG Reduced (t CO2/year)	0	114,000
Assumptions:		9% of total PMV trips shifted to BRT; Average 8km PMV trip shifted to BRT; Objective 1-6 activities implemented
Objective 8: Improve Pedestrian, NMT Facilities and Land Use in Center and Along Corridors		
Outcome	Poor pedestrian facilities throughout Jakarta; Inconvenient	Convenient NMT and pedestrian trips increases

Objective	Baseline	Project
	pedestrian NMT connecting trip to BRT forces increased use of private car and tax	overall use of BRT and NMT connecting modes
Total BRT trips in time period		2,000,000
Reduction in motorized connecting trip kms		246,000
GHG Reduced (t CO2/year)	0	39,000
Assumptions:		Objective 1-7 activities implemented; 30% reduction of the 13.6% of BRT trips that have PMV feeder; average trip distance of 3km
Objective 9: Public Transit and BRT (Batam, Yogyakarta, Palembang, and others)		
Outcome	No public transport improvement	Full BRT implemented in 1 of target cities
BRT Passengers/Day	0	32,000
GHG Reduced (t CO2/year)	0	15,000
Alternate Outcome	Students driven to schools, limited use of bicycles and becaks; most university students using motorcycles to get to class	4% of students walking and biking to school
Short-trip motorcycle pass-kms/yr	6,000,000	5,760,000
GHG Reduced (t CO2/year)	0	15,000
Assumptions:		10000 short pass trips/day in focus areas; 2km/trip

The following overall data and assumptions were used in estimating the emission reductions in the table above.

Data, Assumptions and Sources Used to Estimate GHG Emission Reductions

Data	Source
25% of Jakarta BRT passengers previously used private motor vehicles (PMV) for their trip	JICA survey of Jakarta BRT passengers, February 2004
Breakdown of previous PMV trips is: 14% car, 6% taxi, 5% motorcycle, 1% bajaj	JICA survey of Jakarta BRT passengers, February 2004
BRT bus emits 1100g/km CO ₂ Non-BRT bus emits 2600g/km Car & taxi emit 506g/km CO ₂ Motorcycle emit 335 g/km CO ₂ Bajaj emit 450g/km CO ₂	CONAMA Emissions Inventory, 1997, for Brazilian vehicles. (Judged to be more similar to Indonesia's vehicle mix than IPCC data.) BRT buses use "EPA-94 standard" value. Non-BRT buses use "pre EPA-91". Cars are non-catalytic. Motorcycles are average of 2- and 4-stroke. Bajaj use value for 2-stroke motorcycle.
Average passenger loads: BRT bus = 65 Car = 1.2 Motorcycle = 1.2 Taxi & Bajaj = 0.5	Jakarta observations; also consistent with STAP-GEF Table 2: derived from a variety of sources (Sperling, Dan, University of California at Davis; UK Dept. of Environment; European Commission)
Average Jakarta BRT trip = 8km	Estimation based on model data
BRT passengers exhibit 50% price elasticity of demand	General estimation based on models of demand in other cities. An estimate of elasticity specific to Jakarta will be made during the project implementation.

ANNEX E: STAKEHOLDER PROCESS USED FOR DEVELOPMENT OF PROJECT BRIEF

The following reports document some of the stakeholder process of the PDF-B used to develop the project brief:

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Jakarta Transport Council Meeting Report

Project: PDF –B GEF Transport Project for Jakarta.

Location: Jakarta, Indonesia

Dates : 18 January 2006

Time : 08.30- 13.00

09.00-09.15 Report of Jakarta Transport Council activities for 1 year by Sutanto.

Sutanto explained about role of Jakarta Transport Council (DTK-J) on decision making process in Jakarta. Beside giving recommendations about transportation policy to the governor, DTK-J is suppose to be an independent body which gain trust from the society. Therefore, he stated that the objective the workshop is to get input and criticize from the society to optimize the role of DTK-j.

09.15-10.00 Speech by Lt. Governor, Dr. Ing Fauzi Bowo

Lt. Governor explained about institutional of Governor of Jakarta, which is consist of Sutiyoso as Governor and himself as Lt. Governor. He stated that Jakarta Transport Council has given some recommendations to the Governor. But, since he didn't get any copied of those recommendations, so he couldn't support the recommendations. As the result, he suggests to the Jakarta Transport Council to keep contact with him. So, he can support the Jakarta Transport Council role as advisory body to the governor and bridging it to the society. In addition, he expect that The Jakarta Transport Council also can fulfill its role as evaluator of Government policy in transport sector.

Lt. Governor gave an example of the government policy about busway development plan. He stated that 15 corridors of transjakarta busway indicating that on those corridors there are some amount of traffic volume which are require special attention. He emphasize on some problems along 2nd and 3rd corridor of transjakarta busway. So, he wish that for other corridors the government will do it better to eliminate negative impact. In addition, he mentioned about huge allocation of budget the government of Jakarta for the expansion of BRT system. He raised issue about a possibility of the government involment on monorail , especially to support it financially. So, he expect that DTK-J can giving advisory to the governement about cost efficiency aspect in term of public interest in public transport development. Which one that most appropriate for the people.

Lt.Governor suggest to the DTK-J to have more intensive relationship and communication with local parliament in order to get better solution for transport problems in Jakarta.

10.00-10.45 Speech by Director General of Land Transportation, Ir. Iskandar Abubakar, M.Sc

Iskandar stated that transportation means should be provided for all communities. He stated that Jakarta is the inspiring city for other cities in Indonesia. He stated that he impressed with political will the government of Jakarta to allocated huge budget for financing the development of BRT system in Jakarta. This predence has inspired other cities to do the same thing. He wish the Jakarta Transport Council can influence for better transport system in Jakarta.

11.00-12.30 Presentation and discussion

Chair : Dr. Agus Sidharta (DTK-J)
Resource person : Prof. Sutanto Soehodho (DTK-J)
Nurrachman, CES, MM (Head of Dishub)
Bambang Gardjito, SH (Head of BP Transjakarta)
Darmaningtyas (INSTRAN)

Prof. Sutanto Soehodho (DTK-J), Sutanto explained about goal of this workshop to the audience that DTK-J want to published their activities during the first year of their duty. He started his presentation by mentioned legal aspect of establishment of DTK-J which is Bylaw number 12/2003. Based on that law, the main role of DTK-J is Accommodated input from society and giving Information that should be kept in mind when making a decision in transport sector to the government of Jakarta. In addition, he explained about vision and mission of DTK-J. The vision of DTK-J is being trusty independent body in order to developing policy of sustainable transport system in Jakarta and the mission of this body is to encourage public participation in order to build up transparency on developing policy of sustainable transportation system. As the result, DTK-J needs public support to do its job. He explained about what DTK-J has been doing for one year of its duty such as giving input to governor for taking decision about the increasing of regular bus fare; giving consideration about monorail since DTK-J distrust with the proposal of consortium of monorail and it's proven with financial problems that faced by the consortium of monorail.

Nurrachman, CES, MM (Head of Dishub), stated that Dishub has closed relationship with DTK-J, so he has been well informed about activities of DTK-J. He suggest to DTK-J to more active in term of published its activities through printed media, radio and TV. Actually, DTK-J should reported their activities to the governor and his staff. He expect that DTK-J could be the real trusty independent body to develop transportation system –not only for Jakarta- for Greater of Jakarta.

Bambang Gardjito, SH (Head of BP Transjakarta), stated that BP Transjakarta (Authority body for Transjakarta Busway) established by Governor decree no. 110/2003. He explained about their effort to maintain level of service of transjakarta busway. For infrastructure, they have duty to maintain bus stop and separator of special lane of transjakarta busway. He claimed that TJ can absorb more than 200 people as their employee for ticketing service and security at each bus stop and inside the bus.

He stated that BP Transjakarta always consult to DTK-J in decision making process to increase fare of TJ. Based on Governor Desree no. 1912/2005 the Transjakarta busway have a new fare which are IDR 2000,- in the morning before 7 am, and IDR 3500,-. The new fare is more high about IDR 1,500 in the morning and IDR 1.000,- for the regular time. For feeder services, the fare which are consist of fare regular bus and transjakarta busway are IDR 6.500 for bus with AC and IDR 4.000,- for economic class.

Headway of transjakarta busway during 5-7 am is 2,5-4,5 minutes and for regular timethe headway is about 1-1,3 minutes. During 2004, transjakarta serves 16 million pax. The number of passenger that served by transjakarta busway increase to 21 million pax at 2005. Income of BP Transjakarta at 2004 is 39 billion rupiahs and it become 55,87 billion rupiahs at 2005. He claimed about subsidy to passenger of Transjakarta busway is IDR 285 until march 2005 and then decrease to IDR 215,- until September 2005. lately, the subsidy become IDR. 109,-. Per pax.

Darmaningtyas (INSTRAN), Darmaningtyas emphasize his presentation on 2 things of DTK-J role which are still not work. The role of DTK-J are bridging from society to the government and public education. He complained about the government plan to develop inner toll roads in Jakarta which are some of them have parallel route with corridors of Transjakarta busway. Since on the Jakarta transport macro masterplan didn't mentioned about inner toll roads in Jakarta, he expect that DTK-J can play their role to keep consistency of policy to develop sustainable transportation system in Jakarta.

Q&A

1. Najib, Tarumanegara University

Q: how about relationship and role of local parliament to DTK-J? How effective the recommendations of DTK-J to the government of Jakarta

A: DTK-J is a partner to local parliament of Jakarta. About the effectivity of our recommendations, that's beyond of our authority. We just gave the recommendations and the final decision is on the government hands

2. Jaka, Association of Diffable People of Indonesia

Q: Is BP Transjakarta considering to the facilities for diffable people on transjakarta busway?

A: That's the reality. The government ignored to provide facilities which are fulfill with universal design concept. Hopefully, in the future DTK-J can encourage the government to pay more attention about this issue.

3. Lutfi, member of bike to work community

Q: Is DTK-J concern with non motorized users in Jakarta? Why non motorized transportation not included on macro transport masterplan in Jakarta?

A: Sutanto stated that he agreed with a concept which is encouraged people to utilized non motorized transport. He said that with more detail data, hopefully DTK-J can influenced the government to pay attention about provision of non motorized transport facilities.

4. Firdaus, MEB

Q: What recommendations that published from DTK-J in relationship with vehicle test for public transport in Jakarta? Can DTK-J being basis for struggle to inner toll road development in Jakarta?

A: Nurrahman said that planning to develop inner toll roads in Jakarta is to accommodate mobility of motorized vehicle in Jakarta.

5. Amir, Department of Public works of Jakarta

Q: suggested about financial mechanism for transportation in Jakarta like 'ear marking mechanism for transportation sector.

6. Panjaitan, Organda DKI

Q: suggested some actions to do by DTK-J such as published newsletters, more active to do fund raising, enforced internal regulation and educated operator of public transport about formula to determine fare.

7. Ariyani and Ratna, Association of Diffable Women in Indonesia

Q: complained with absentia of provision of facilities fo diffable people.

A:

8. Saudur, Depertment of Transportation of Jakarta.

Q: Mentioned about recruitment process of new member of DTK-J which will held this year.

REPORT

**The Study on
KEY FACTORS FOR ENHANCING
PUBLIC TRANSPORT USAGE
IN JAKARTA**

Prepared for



by



January 2006

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A. BACKGROUND

For years, transportation system in DKI Jakarta has not been improving. Traffic condition shows depressing and worsening from time to time, leading to inefficiency in un-renewable energy usage and causing negative impacts onto the quality of

micro and macro environment (clean and fresh air for human life, and negative impacts of the greenhouse effects)

Based on data, there are 7,576,512 kilometers of roads throughout DKI Jakarta, or only some 6.5% from 661.62 square kilometers of total areas of the province. Everyday, the roads have to cover 4.8 million vehicles (some 2.6 million of which are motorcycle), –and it keeps increasing by some 5% per year.

Reconstruction of the transportation system is the most urgent policy to be issued to overcome the getting worse traffic jam in Jakarta; and in early 2004, the regional government of DKI Jakarta has begun to introduce a new public transportation system called “Bus Way”

Ideally, to support the implementation of Bus Way, it needs specific transportation system, which is integrated with feeder service transport, public transit rider-ship, parking facilities at the main bus terminals, Non-motorize transportation (NMT) lanes, and pedestrian lane.

Based on the idea, PELANGI FOUNDATION as a non-governmental organization tries to advocate the government of Jakarta in fixing the city transportation system: the more adequate operation system of Bus Way. Here, it needs to make an evaluation toward the current performance of Busway system (with TransJakarta as the operator) --in order to dig out information about the disadvantages and weakness of the system as well as the threats and opportunities offered. Results of the evaluation will be valuable points for enhancing the busway concept for the near future. For this reason, PELANGI FOUNDATION needs to conduct surveys toward the consumer target and the public transportation operators. And it is honor for JRI Research to send this proposal for the respective study.

B. RESEARCH OBJECTIVES

1. To get impression from public transport user, TransJakarta user and existing operator about TransJakarta performance (TransJakarta’s strengths & weaknesses).
2. To get a big picture on how to make the best way in order to increase rider-ship for TransJakarta.

- On how to implement the feeder system, public transit rider-ship, parking facilities at the main bus terminals, Non-motorize transportation (NMT) lane, and pedestrian lane (Opportunities & Threats of the current public transportation concept).
3. To get understanding about attitudes and expectation of public transport operator towards the BRT's concept / system.
 4. To get key words for public campaign activities to persuade the communities to shifting from private vehicle trip to public transport and NMT for their regular activities

The inputs will become references for PELANGI FOUNDATION in advocating the government of Jakarta, in order to:

- Increase the effectiveness of BRT service (i.e. : capacity, speed, and area of population served) to dramatically expand the modal shift impacts
- Increase the sustainable transport by encouraging modal shift from private motorized vehicles to public transport.
- Make Improvements in pedestrian design that is directly contribute to public transit ridership, by reducing incentives for the excessive use of private motorized vehicles (which currently are extremely hostile to pedestrians).
- Increase the operational efficiency of Jakarta's BRT, in order to increase the speed and capacity of the system, including the feeder system.

C. RESEARCH METHODOLOGY

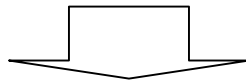
PHASE I:

QUALITATIVE RESEARCH

Focus Group towards the consumers and IDI towards the operator
(conducted by JRI Research)

To dig up insights related to

- Important aspects or attributes expected by the main target consumer toward public transportation services (particularly the BRT service) that can encourage them to use BRT services for supporting their activities.
- Important Attributes leading to satisfaction or dissatisfaction of the main target consumer toward the services and the operation of TransJakarta and the supporting infrastructures.
- Aspects that can become threats and opportunities for the more effective and efficient implementation of Bus Way Concept.



**PHASE II:
QUANTITATIVE RESEARCH**
(conducted by PELANGI FOUNDATION)

- To make a measurable assessment on the Strengths and Weaknesses of the BRT service; and toward the Opportunities and Threats from the whole concept of Bus Way as planned.
- To get key words for public campaign activities to persuade the communities to shifting from private vehicle trip to utilize public transport and NMT for their regular activities.
 - The best key words should reflect important attribute aspects expected by the consumers from public transportation service, and at the same time become the key strength that are already or will be performed well from the Bus Way concept (*the highest impact and also as the highest performance*).

Note : *this report only describes the findings of the Phase I Research (Qualitative Research) only.*

FIELD-WORK DATE :

- FGD : January 12 & 13, 2005
- IDI : January 9 – 20, 2005

D. RESEARCH FINDINGS

PUBLIC TRANSPORTATION USERS

(FOCUS GROUP DISCUSSION)

I. RESPONDENTS PROFILE.

GROUP	DETAILED PROFILE
<ul style="list-style-type: none"> NON USERS OF TRANSJAKARTA & CHOICE RIDER : <i>Regularly utilize motorcycle and sometimes utilize public transport (non TransJakarta) for working / school trip.</i> 	<p>SEX :</p> <ul style="list-style-type: none"> Males : 4 respondents Females : 4 respondents. <p>AGE :</p> <ul style="list-style-type: none"> 25 – 30 y.o : 4 respondents 31 – 35 y.o : 4 respondents <p>EDUCATION :</p> <ul style="list-style-type: none"> S1 : 3 respondents D1 / D3 : 4 respondents High school : 1 respondent <p>All are working peoples (B C s.e.c)</p>
<ul style="list-style-type: none"> USERS & CHOICE RIDER TRANSJAKARTA: 	<p>USERSHIP :</p> <ul style="list-style-type: none"> Transjakarta users : 5 respondents. Choice rider – Transjakarta : 2 respondents <p>SEX :</p> <ul style="list-style-type: none"> Males : 3 respondents Females : 4 respondents. <p>AGE :</p> <ul style="list-style-type: none"> 25 – 30 y.o : 4 respondents 31 – 35 y.o : 3 respondents <p>EDUCATION :</p> <ul style="list-style-type: none"> S1 : 4 respondents High school : 3 respondent <p>All are working peoples (B C+ s.e.c)</p>

II. PUBLIC TRANSPORTATION USAGE HABIT

TRANSPORTATION MODAL USED.

It is more difficult to find respondents from group of the TransJakarta choice rider than from the group of non-TransJakarta choice rider. Results from the focus group shows that this phenomenon is caused by the following factors:

- Respondents whose driving route (from home to work place) is not covered by TransJakarta tend to change to their own private vehicle, particularly motorcycle. The reason is because:

- The transportation cost is cheaper.
- Shorter Time taken/more anticipated.

"Ever since the fuel price increases, I'm now more often using motorcycle, because it is cheaper than using public transportation. I have to take three trips to go to my work. So, it is faster (choice rider, non Transjakarta)"

"Sejak BBM naik, saya jadi lebih sering pake motor, soalnya jadi lebih murah daripada pakai kendaraan umum, saya kan harus nyambung 3 kali, lebih cepet lagi" (choice rider, non TransJakarta)"

"On Monday, I will absolutely use motorcycle, because traffic on that day is so busy; so for other days, to get faster I also use motorcycle" (choice rider, non TransJakarta)"

"Kalau hari Senin, pasti naik motor, soalnya jalanan lebih macet, jadi supaya cepet, hari-hari lain, kalau misalnya keburu-buru, ya pakai motor" (choice rider, non TransJakarta)"

- Respondents whose driving route (from home to work place) is covered by TransJakarta tend to use TransJakarta, leaving their private vehicle, particularly car, at home. The reason is because:

- Transportation cost using TransJakarta is cheaper.
- Shorter Time taken/more anticipated, and
- More comfortable (not tired out), not trapped in traffic jam at alternative streets just to avoid the 3 in 1.

In fact, as said by a few respondents from group of TransJakarta choice rider, instead of using their private cars to office, they will often park them at Blok M area; and then from there, they will take TransJakarta busway to go to their office.

"now, I prefer using the busway, because it is fast, cheap, and comfortable. No need concentration as if driving my own car or no need to look for shortcut road to avoid the 3 in 1" (Transjakarta user)"

"Sekarang ada busway sih mending pake busway, cepet, murah, enggak cape lagi, enggak perlu konsentrasi nyetir dan harus mencari jalur-jalur tikus untuk menghindari 3 in 1" (TransJakarta user)"

"My office is in Cempaka Putih. From home, I usually take my car, but will park it at Blok M, and then from there, I take busway to go to my office. At noon, I take another busway to go to Blok M, take out my car there, and then go back to Cempaka Putih" (Choice rider – TransJakarta)."

"Kalau harus ke kantor cabang di Cempaka Putih, biasanya saya pakai mobil, parkir di Blok M, ke kantor naik busway, terus siangnya ke Blok M naik busway lagi, ambil mobil untuk ke Cempaka Putih" (Choice rider – TransJakarta)."

Generally, to go from their home to office, all respondents have to take 2 – 3 different trips at once. Few respondents whose driving route is not covered by TransJakarta (busway) try to take different routes to and from their work place. They are aware of the fact that by taking different public transportation at once, they have to take more trips to go to than to go back from their office, or in the other way around. This is just to speed up their travel time, though as consequence they have to spend more money for transportation and to feel more discomfort from the changing of public transportation trips.

"to go to work, I take 2 bus route, but when going back, I take 4 different route at once; of course, it is more complicated and also costly. But I can save 1 - 1½ hours rather than if I'm taking the same route in the morning; I prefer pay double than getting tired on the street!" (choice rider – non TransJakarta user)

"Kalau pergi, 2 kali ganti kendaraan, tapi kalau pulang 4 kali lewat rute yang beda, lewat belakang ITC; memang lebih repot sih harus turun naik, lebih mahal lagi, Cuma kalau buat pulang, bisa irit waktu 1 sampai 1½ jam dibandingkan kalau pakai rute yang sama dengan berangkatnya; mendingan bayar 2 kali lipat daripada harus kelamaan di jalan, cape!" (choice rider – non TransJakarta)

Private motorcycle utilization tends to be considered as the ideal modal of transportation. The 'being forced (*keterpaksaan*)' situation --to cut down the transportation cost and the travel time --becomes a factor influencing the respondents to use the modal. Actually, the respondents do not like to use motorcycle, due to the high risk, distress (from dust and smoke from other vehicle, particularly buss), and tiredness (full concentration when driving). Due to the fact, respondents who live outside Jakarta (if they have enough time and transportation budget) prefer using their motorcycle just to reach an intersection road where public transportation vehicle to Jakarta is passing through, and then put their motorcycle at a private-managed storing place near the intersection (usually located near a tollgate).

"Actually, using motorcycle is not comfortable, tired, high risk, 2 months ago I got crash; not to mention the dust and car smoke faced; But what can I do about it, I have to save money, and need short time to take. Cost to use public transportation is almost Rp 20,000, back and forth; but if using motorcycle, I only pay for 2 liters of gasoline or less. The cost is even lesser if I take fellow to ride in!" (choice rider – non TransJakarta)

"Pakai motor sebetulnya enggak enak, cape, resikonya tinggi, 2 bulan yang lalu aja saya pernah keserempet, belum lagi debu dan asap kendaraan di depan kita; Cuma mau bagaimana lagi, saya perlu ngirit, lagipula sering harus ngeburu waktu. Kalau pakai kendaraan umum selain lama di jalan, juga pengeluarannya jadi tinggi, kalau pakai kendaraan umum perlu biaya hampir Rp.20.000,- pulang pergi, tapi kalau pakai motor, 2 liter bensin aja enggak habis, apalagi kalau berdua dengan teman, lebih irit lagi!" (choice rider – non TransJakarta)

"If not in a hurry, and not have to go home too late, and my money is enough, I will use my motor to reach the tollgate, place it at a private storing place, pay Rp. 1,000 a day, and then take public transportation to go to my office" (choice rider – non TransJakarta)

"Kalau lagi tidak terburu-buru, terus diperkirakan pulang 2 jam, enggak terlalu malam, dan uangnya juga tidak nyekak, biasanya motor dipakai sampai pintu tol, terus dititipin, bayar Rp. 1.000,- sehari, ke kantor naik kendaraan umum" (choice rider – non TransJakarta)

III. OPINION AND ATTITUDE TOWARD PUBLIC TRANSPORTATION, PARTICULARLY TRANSJAKARTA

In general, service quality offered by TransJakarta is considered better than other public transportations; and service quality of Metromini, Kopaja and Kopami is considered as the worst.

A. TRANSJAKARTA

A.1. STRENGTH

All respondents believe that the benefits or main strengths from using TransJakarta are on its quick and predictable travel time.

TransJakarta is also considered as a comfortable and secured public transportation tool.

- Comfortable because it is equipped with a great air conditioner system and sprayed with perfumes regularly; still, most respondents believe that the perfumes is not of the right type and stinky.
- It is interesting that apart from the low probability rate of taking a seat on TransJakarta bus, all respondents do not consider it as a serious factor that can downgrade the comfort rate. Here, the quick travel time and the air-conditioned room are considered as compensation for the weak point. Additional seats on the bus, in fact, are only considered to cause a longer line-up as impact from the decreasing transport capacity of TransJakarta bus.
- It is also believed that TransJakarta offers higher security level to the passengers. The reason is because bus construction does not enable the passenger to stand hanging on the door, and restricts a pickpocket from maneuvering.
- Ticketing System supported with bus construction and the security person stands in make TransJakarta not possible for street musicians, who often irritate the comfort and security of public transportation facilities.

Regarding the tariff, TransJakarta users believe that tariff for TransJakarta is quite equal with the benefits offered (quick travel time, and comfort); in fact it is considered more economical. For some non users, tariff of TransJakarta is

considered a little bit too high; they expect tariff of TransJakarta is ranging around Rp. 2,000 to Rp. 2,500.

Such different opinion is understandable; since they come from different background of using the transportation modal. For TransJakarta, some user respondents are private car owners who change to using TransJakarta. In another side, the non users are those who 100% change from using public transportation to using/becoming choice rider motor -- with main motivation is to cut down the transportation cost.

"Quick, faster than using private car, predictable, cheaper and can save money" (User Transjakarta)

"Cepet, jauh lebih cepet daripada pakai kendaraan pribadi, waktunya bisa di pas-pasin, lebih murah lagi, bisa menghemat pengeluaran" (User Transjakarta)

"Full..., need to stand often, but it's not problem, only a while, and the bus is air conditioned" (User Transjakarta)

"Penuh..., seringnya sih berdiri, tapi enggak masalah, toh Cuma sebentar, bisnya dingin lagi" (User Transjakarta)

"there is security, street musicians are not allowed. Once, pickpocket acted, yet the victim screamed out. The security then investigated all passengers one by one, and catch the criminal. This is different from the regular bus, where the pickpocket can easily jump out of the bus" (User Transjakarta).

"Ada keamanannya, tukang ngamen enggak boleh ngamen. Pernah ada copet, penumpang teriak, akhirnya setiap tas penumpang digeladahi satu per satu, copetnya enggak bisa kabur, orang pintunya tertutup, coba kalau bus biasa, pasti udah loncat" (User Transjakarta).

"the tariff does not affordable to the common people. It's too high for low-income people. It should be similar with tariff of regular bus; not everyone takes only one trip to go to their office" (choice rider – non Transjakarta)

"Tarifnya kurang memasyarakat, kalau buat golongan bawah kemahalan, harusnya sama dengan bus umum; masalahnya kan untuk ke kantor, rata-rata enggak Cuma 1 kali naik kendaraan umum" (choice rider – non Transjakarta)

A.2. WEAKNESSES.

Almost all respondent users have complaint about TransJakarta scheduling mechanism, which is considered as not good, because:

- Schedule for a bus to return or shift is taken place at the peak hours (5 – 6 p.m. at noon), lacking the number of bus operated, and cumulating the number of passengers not served.

"How could it be, many passengers waited, and...then 4...5.. empty buses passed over the passengers. they said that they have to go back to the pool; This should not happen if they pay attention to the passengers' interest, so the schedule should not be taken during the peak hours" (user Transjakarta)

"Itu gimana sih, penumpang sudah banyak nunggu, eh...ada 4...5..bis kosong, lewat aja terus, enggak peduli penumpang udah numpuk, katanya sih harus pulang ke pool; mustinya kan jangan gitu, perhatikan kepentingan penumpang dulu, jadi mustinya jadwal shiftnya jangan pas jam sibuk" (user Transjakarta)

Other aspects also largely complaining about are:

- The exit / entry Management, not well planned: no mechanism and supporting facilities to create proper line-up.
- Lack of discipline drivers (ignoring the red light) and paying less attention to the passengers' comfort (sudden break).
- Ticketing: less friendly service; system error, cumulating the line-up number.
- Handle/grip for stand-on passenger is not well maintained, some are vanished.
- No rigid regulation concerning the passenger maximum capacity; bus oftentimes too crowded
- Bus supply management, not well managed for peak hour and outside peak hour: oversupply outside the peak hour, but undersupply during the peak hour.
- Bus Stop (halte) is not adequate and not meeting the security standard:
 - Handle/grip for stand-on passenger is not well maintained/ loosening.
 - Not big, unable to cover over supply of potential consumers during peak hour.
 - No toilet; and the ticketing system at the entry point troubles the passengers.
 - Inadequate seat facility.
 - Lack of comfort, rain spray, and hot because of no AC available.
 - Slippery stairway to the bus stop.
 - Handgrip at the bus stop is iron-made and sharp-edged.
 - No facility for handicap person (difficult to access).
 - No Clock for time adjustment (to ease the passenger to claim a discount).
 - Different Distance from one bus stop to another bus stop (500 meter is considered quite ideal).
 - Not all of the bus stop is equipped with overpass bridge facility; in fact, passenger button at the zebra cross also does not function.
- Limited Operation Hour (until 9 p.m.), not agree with activity of urban people.

"There should be a line-up lane like at a Bank to discipline the passenger. It is difficult to enter the busway during a peak hour, and also when exit. Feel sorry for the elders. It's dangerous, you could fall into a space hole between the bus and the bus stop, a deep hole!"
(Transjakarta user)

"Harusnya ada jalur antrian seperti di Bank, jadi tidak rebutan dan dorong-dorongan. Kalau pas jam sibuk, untuk bisa masuk busway, susah sekali lho, rebutan dan bentrok degan yang turun juga. Kasihan untuk orang yang sudah tua, lagipula bahaya, salah-salah kaki kita bisa terperosok lubang antara bis dengan halte, jaraknya tinggi lho!"
(Transjakarta user)

"there should be a clock at the ticket counter; since there is discount hour, it wouldn't disadvantage the passengers (user Transjakarta)"

"Di bagian penjualan tiket, harusnya ada jam, soalnya kan ada jam diskon, jadi penumpang tidak dirugikan" (Transjakarta user)

"it should be until 12 p.m., not 9 p.m. like now. Jakarta is still a busy town at 9 p.m. So, if expecting to go home late, I had to use my own car" (choice rider – Transjakarta)

"Harusnya sampai jam 12 malam, sekarang kan Cuma sampai jam 9 malam, padahal untuk ukuran Jakarta, masih sore. Akhirnya kalau diperkirakan bakal pulang telat, jadi pakai mobil sendiri, takut susah pulangnya" (choice rider – Transjakarta)

A.3. OPPORTUNITIES

All respondent give positive response toward TransJakarta. TransJakarta (busway) is considered to be the right solution to overcome bad crowded traffic in Jakarta. TransJakarta (busway) can also influence the shifting of private vehicle usage to the public transportation usage. Thus, it is very potential to overcome the bad traffic and air pollution in the city.

" Busway is good for Jakarta; perhaps this specific system should be applied for all traffic routes in Jakarta. Lots friends of mine are now using busway, leaving their cars at home. Even on Sunday, they choose to use Busway to ITC instead. Better to park their cars at BlokM, more efficient and not tired" (Transjakarta user)

"Untuk Jakarta, cocok Busway, mungkin harusnya semua jalur jalan di Jakarta dibuat jalur khusus seperti Busway. Setelah ada busway, banyak teman saya yang tadinya pakai mobil jadi pakai busway. Hari minggu aja, kalau mau ke ITC lebih milih pakai busway, mobil mendingan diparkir di BlokM, lebih irit, enggak cape lagi" (Transjakarta user)

A.4. THREATS

The limited passenger load capacity during the peak hour is potential to influence the passenger to shift back to their private car.

"From time to time, number of passenger is getting increase, and busway often couldn't serve them all, they have to wait very long at the bus stop; if fact, you need to wait to go to toilet (because no toilet facility in the bus stop). If the waiting time is getting longer, people will use back their private car, at least their motorcycle" (Transjakarta user)

"Sepertinya makin lama, penumpang busway makin banyak, sering enggak keangkut, sering harus lama sekali nunggu di halte, yang repot kalau ingin pipis, harus ditahan terus. Kalau waktu nunggunya menjadi semakin lama, lama-lama orang akan pakai kendaraan pribadi lagi, paling tidak pakai motor" (Transjakarta user)

B. OTHER PUBLIC TRANSPORTATION TOOLS

B.1. STRENGTH : None

*""Well, public transportation is now terribly awful, crowded, very uncivilized"
(choice rider – non Transjakarta)*

"Angkutan umum sekarang sih sudah sangat parah, semrawut, sudah sangat tidak manusiawi" (choice rider – non Transjakarta)

B.2. WEAKNESSES

All respondents believe that service quality of public transportation is very low. This could be influenced by some factors, i.e.:

- A Long Travel Time, hard to predict, trapped in a bad traffic. This is considered as the main problems for the public transportation usage.
- Bad Discipline of the driver:
 - Dropping off or picking up the passengers anywhere on the street, not at the bus stop.
 - Dropping the passengers not at the destination place, forcing them to shift to another bus heading to destination place.
 - Dropping off or picking up the passengers outside the bus terminal, stagnating and disordering the traffics, and lessening the passengers' comfort.
 - Race against each other to pick up passengers to pay the daily trip fee (*setoran*).
 - Bad discipline of the driver is also largely because the bus is not steered by unauthorized driver or '*supir tembak*'.
- Low Security Level:
 - Pickpocket and street musicians intimidate the passenger, without restraint.
 - Pay no attention to the maximum passenger capacity of the bus; overload capacity makes the passengers to stand on the door. The situation is also triggered by the imbalance factor between number of passenger and number of bus armada during the peak hours.
- Condition of some of bus armada is poor, no longer proper for operation.

- No formal standard on tariffs for the small-size public transportation vehicle (mikrolet), tariff tends too high.

Generally, respondents believe that supporting facility for urban transportation is now very unsatisfied:

- Bus stops are considered not adequately constructed. At some places, in fact, the bus stops are not occupied, while in other sites the bus stops are too small. The bus stops are also not optimally functioned, and are taken over by street vendors. Bus drivers also rarely use the bus stop to load/unload passengers. In addition, lights on the bus stop are very inadequate; bring security problems for the users.
- Some crossover Bridges are not in proper condition. Inadequate lightning, cracked floors, unguarded; so the respondents tend to reluctantly use bridges.
- Pedestrian path situating in busy streets have to provide more protection to the pedestrians (e.g. : near a market, shopping complex or terminal). In reality, however, they are largely occupied and used by street vendors and motor bikers.

"Well, don't expect to be treat as a human being from public transportation; so crowded...need to stand on the doors, hot, pickpockets operate in, street musicians intimidate.....If the street is free, the bus drivers will chase against each other to get passenger, and suddenly, they turn back and drop off the passengers to take another bus" (choice rider – non transjakarta)

"Wah naik kendaraan umum sekarang ini jangan berharap diperlakukan sebagai manusia; sudah berjubelpun masih terus disuruh rapat...rapat., sampai harus bergelantungan di pintu; panas, macet, banyak copetnya lagi, yang ngamenpun suka pakai ngancam seperti preman.....Kalau pas jalanan enggak macet, kebut-kebutan kejar setoran, terus bisa tiba-tiba aja disuruh turun, disuruh pindah ke bis lain karena mau muter" (choice rider – non transjakarta)

"Actually, streets in Jakarta are crowded; so, it's better to take pedestrian bridges, more secured...more relax. Contrary to the fact, crossing the street by taking the pedestrian bridge is even unsecured, too many criminal operates, not to mention at night...."(Choice rider – non Transjakarta)

"Sebetulnya, di jalanan Jakarta yang padat kendaraan, nyebrang itu enaknya pakai jembatan penyebrangan, lebih aman...lebih santai; tapi sekarang justru kebalikannya, menyebrang pakai jembatan penyeberangan justru lebih tidak aman, banyak preman, apalagi kalau malam, gelap...."(Choice rider – non Transjakarta)

"public transportation drivers are like a criminal, not to mention drivers of metromini who will forget their passengers as a human being when racing against each other. They consider people as commodities, not a human being..... a sudden stop, slip over, so disturbing for the passengers" (Choice rider– non Transjakarta)

"Supir angkutan umum kayak preman, ugal-ugalan, apalagi supir-supir metromini, kalau sudah kejar-kejaran rebutan penumpang, penumpang yang ada di dalam metromini suah tidak lagi dianggap manusia, tapi seperti barang aja.....ngerem, nyalip seenaknya, penumpang rasanya seperti dikocok-kocok" (Choice rider – non Transjakarta)

"As in Kota, it's hard to walk on pedestrian path, street vendors already occupy; even the unoccupied one is used by motor bikers when the traffic is

crowded; perhaps, it should be protected with a fence!" (Transjakarta user)

"Seperti di daerah kota, kita susah untuk jalan di atas trotoar, soalnya dipakai pedagang kaki lima, yang kosongpun kalau jalanan macet akhirnya dipakai oleh motor, mungkin harus pakai pagar kali ya!" (Transjakarta user)

B.3. OPPORTUNITIES

With so limited number of busway corridors, the role of non-Transjakarta transportation tools remains very vital for public transportation; application of bus lane such as 'busway' and design modification to the bus are considered very effective in overcoming the major weakness of public transportation, namely the long travel time.

"why not develop a bus lane for the regular bus or metromini ? so they won't stag in traffic jam and chaotic?" (choice rider – non TransJakarta)

"Kenapa jalur-jalur biskota atau metromini, tidak dibuat seperti busway saja ? supaya tidak terjebak macet dan tidak ugal-ugalan?" (choice rider – non Transjakarta)

B.4. THREATS

The long travel time and the low comfort rate, the increasing tariff due to the increase in fuel price without an increase in people's income. In another side, the easiness in buying a motor cycle (related to the easy and simple credit system) influences the respondents to use motorcycle instead of public transportation tool.

"it's the government's mistake, why they increased the fuel price; cost of public transportation becomes higher; in another side, now it is easy to own a motorcycle, with only Rp.1 million deposit you can take a motorcycle home" (choice rider – non TransJakarta)

"Salah pemerintah sendiri, kenapa naikin BBM, ongkos kendaraan umum kan jadi mahal, padahal sekarang untuk punya motor gampang, punya uang Rp.1 juta aja sudah bisa bawa pulang motor" (choice rider – non Transjakarta)

IV. IMPORTANT ATTRIBUTE

There are different opinions between the non-TransJakarta choice rider and the TransJakarta user/choice rider regarding 6 attributes shown to them (travel time, tariff, security, comfort, chance to get a seat, bus schedule order).

For the non-TransJakarta-choice rider, travel time is the most important attribute mostly expected from public transportation modal, including TransJakarta. This attribute has been highly well performed by TransJakarta. The second important attribute is the low-priced

tariff, which is considered not yet afforded by TransJakarta. For the third important attribute, some respondents refer it to the security aspect (already fulfilled by TransJakarta), and the seat availability (not yet met by TransJakarta).

In the other side, TransJakarta users / choice riders consider the schedule regularity as the most important aspect to be met by public transportation; and followed by the travel time, comfort and security aspects; while tariff is considered as the third important attribute.

It is interesting that no one from the non-TransJakarta choice rider pays attention to aspect of schedule regularity and comfort. This indicates the very poor condition of public transportation in the city (non TransJakarta), as the respondents are focusing more on the travel time. This fact is different among those who have regularly used TransJakarta (busway) facilities –they tend to shift their focus more on the schedule regularity and comfort. For those who are not regularly using the TransJakarta/busway facilities, then, the two attributes (schedule regularity and comfort) are becoming ‘unconscious need’.

The different background of the respondents influence their responses toward the tariffs. The TransJakarta user respondents (are those who change their travel modal from private cars to TransJakarta) consider the tariff as the least important attribute to consider; whereas the non users (are those who 100% changing, from public transportation users to become the motorcycle choice rider, with main motivation is to reduce the transportation cost) consider the tariff as the second most important after the quick travel time.

V. OPINIONS AND ATTITUDES TOWARD THE FUTURE CONCEPT OF BUSWAY (TRANSJAKARTA)

The plan to add busway corridors to total 7 corridors by the year 2007 is enthusiastically responded by respondents. They believe the concept is very effective to shortcut the travel time if using a public transportation tool to go to work.

Concept of "one-time payment with 1 (one) same tariff for a variety of destinations inside the busway corridors (even when need to shift to other busway lane as long as not exit the bus stop)" is considered as a very good solution to overcome the high-price cost of transportation these days. The concept, along with the expanding coverage of corridors, is considered to be very effective to lessen the private vehicle usage (either motorcycle or particularly cars). This could even be more effective if the facility is also equipped with low-cost parking areas for private cars, such as at bus terminal or in the outer points of bus stop.

Concept of "feeder support with one ticketing system and get discount from TransJakarta", in one hand, is responded positively; but in the other hand, it could create trouble. The very positive response is because it can cut down the public's transportation cost significantly. In the other side, however, it is concern that application of the ticketing system into the tariff of feeder support will not be supported by the feeder bus drivers/conductor. As often experienced by respondents in the past, the ticketing system is fragile from being rejected by the drivers or conductor.

Attempt to select Harmoni as the busway central terminal is considered quite ideal for becoming the meeting point of various busway routes. Yet, it's also concern that loading capacity of the terminal is not adequate; then, the 1 tariff system will be hard to apply. It is also the same for bus stops situated at the crossroad point.

The 400 – 500 meter distance from one bus stop to another bus stop is considered quite ideal.

"Well, that's good, very helpful; if the coverage is of that wide, so no need to use private car, what for? What is worrying me is only on the bus top. Can it cover transit passengers? Now, with only one lane, the bus stop is already overcapacity!" (user Transjakarta)

"Wah bagus sekali tuh, sangat membantu, kalau jangkauannya sudah luas seperti itu, tidak ada alasan lagi untuk pakai kendaraan pribadi, buat apa? Cuma yang saya khawatirkan haltenya, bisa enggak nanti menampung limpahan penumpang yang mau ganti jurusan? Sekarang aja yang Cuma 1 jalur, haltenya kewalahan menampung penumpang!" (user Transjakarta)

"It's great, the feeder system is very ideal, and very helpful for people to get a low-priced transport; My past experiences when the ticketing system was once applied in Jakarta, however, show that conductors often rejected the tickets.....same thing happens now, my friend who took feeder from Bintaro, was rejected, and his ticket

became useless and he had to pay again for the feeder” (Choice rider – non Transjakarta)

“Enak, sistem feeder seperti itu ideal banget, sangat membantu masyarakat untuk mendapatkan transportasi yang murah; Cuma berdasarkan pengalaman sistem karcis yang pernah diterapkan di Jakarta dulu, kondektornya sering enggak mau terima karcis tuh....yang sekarang aja, ada teman saya bilang pakai feeder dari Bintaro, feedernya enggak mau terima karcis, jadi akhirnya mubazir, tetap saja ngeluarin uang” (Choice rider – non Transjakarta)

Respondents expect that the future Busway concept will be overcome the weakness points in the supporting facilities, such as bus stop, crossroad bridges, and pedestrian path; will provide information board for bus schedule and bus routes at each of the bus stop's gates, and different bus color for different bus routes. In another side, they believe that the NMT lane will not be effective and rarely used. Respondents, in general, believe that bicycle usage for transportation tool in Jakarta is still not common and unusual. It is also hard to realize by majority of people in Jakarta, because they have to ride far or even very far from their home to their office/school. Still, this could be possible for upper-middle class people who live in downtown area.

E. RESEARCH FINDINGS

PUBLIC TRANSPORTATION OPERATOR (INDIVIDUAL DEPTH INTERVIEW)

1. RESPONDENTS PROFILE.

A. CONSORTIUM MEMBER

Operator	Contact person	Title
• Ratax	Bp. Suryadi	Operational Manager - Taxi
• PPD	Ir. Ginanjar	Operational Manager
• Steady Safe	Bp. Agus Sugiarto	Director of Finance

B. NON CONSORTIUM MEMBER

Operator	Contact person	Title
Kopaja	Ir. H.M. Rasmani MM, MBA	1st chairman of business development
Pahala Kencana	Drs. Fredy	Operational Manager

2. ATTITUDES TOWARD PUBLIC TRANSPORTATION SERVICE

All respondents from the operator group, except PPD, admit that public transportation service (non TransJakarta) is very bad. Actually, they have no vision for the increasing quality of their public transportation operation; tending to consider that they have offered a very maximum service quality. This is based on their perception toward obstacles they have to face in offering transportation services to the public. The obstacles are :

- The Operating cost, which is highly costing:
 - The sharp increase in the fuel price
 - Illegal Levies (*pungli*) imposed on the streets
 - Rigid Bureaucratic cost

In another side, chance to get a proper income is very limited, which is caused by:

- Quite large number of students to serve to (about 20%), with special tariff (Rp. 700,-)
- Lessening number of average passengers, who shift to use motorcycle instead (estimated market loss of \pm 30%).
- Bad regulation from the government (over 50% duplication on one route, even 100% duplication (e.g.: Senen – Cikokol) by 2 to 4 different operators.
- Worsening traffic jams, which lengthening the travel time for one route.

"public transportation business is getting difficult nowadays; the cost is increasing, and even higher due to the increase in fuel price. The traffic is getting crowded. You need longer time to travel for one route, and at the end also consume more fuels; whereas number of operators in the same route is also increasing more and more" (Steady Safe)

"Bisnis angkutan umum, makin hari makin berat, beban biaya bertambah terus, apalagi sejak kenaikan BBM, padahal jalanan semakin macet, akhirnya waktu tempuh untuk 1 rit lebih lama dan konsumsi bahan bakar jadi lebih banyak; padahal operator yang main dalam jalur yang sama juga makin numpuk" (Steady Safe)

"there should be not too easy to own a motorcycle. Traffics are getting worse, because number of motorcycles is already too many; number of bus passenger is also

decreasing quite significant, about 30%. It get worse if the bus is full with students who only pay Rp 700" (Kopaja)

"Harusnya kepemilikan motor jangan terlalu gampang, akhirnya jalanan tambah macet gara-gara motor yang terlalu banyak; sekarang penumpang bis kami juga turun lho, lumayan....sekitar 30% turunnya, yang paling repot kalau penumpangnya kebanyakan pelajar, bayarnya Cuma 700, mana ketutup itu" (Kopaja)

"It's already arranged, one bus every 10 minutes; but it's hard to realize, because for the route to/from Ancol – Blok M, there are 3 operators race in, so the driver has to speed up, chasing the other bus; ideally, indeed, there should be only one operator for one route" (Pahala Kencana)

"Sudah diatur setiap 10 menit sekali, tapi susah, soalnya di jalur Ancol – Blok M, ada 3 operator yang main, akhirnya supir harus main kebut-kebutan; idealnya memang untuk 1 jalur hanya 1 operator saja" (Pahala Kencana)

The getting more serious challenges in running the public transportation business operating, apparently, are complained more by private operators than by PPD.

With the increasing operational cost bear by the operator, in another side, competition is getting tighter as the market is lessening. Thus, to reduce the risk cost, and to maintain their business operation, the operators (except PPD) have to apply the daily trip fee (*setoran*) system, with no fixed income (salary) for the drivers.

In reality, the daily trip fee (*setoran*) has some weaknesses, namely:

- Difficulty in controlling the drivers' attitude.
- Motivating the drivers to pick up passengers as many as he can, and finally trigger him to chase against each other to get more passengers and disregarding the maximum passenger capacity of his bus.

"Ideally, there should be the salary system, so there is the timer. Here, we can push the driver to be more ordered. The driver is also more secured, and will be relax in driving the bus. But, this is difficult, only PPD can, because it gets subsidy from the government. Private operation, however, has to run by itself! So, it is forced to apply the daily trip fee system, with all consequence applied" (Ratax)

"Idealnya sih sistem gaji, jadi ada timernya, kalau pakai sistem gaji, kita bisa menekan supir supaya lebih tertib, lagipula supir sendiripun karena sudah terjamin, lebih kalem bawa mobilnya. Tapi itu susah, Cuma PPD yang bisa seperti itu karena disubsidi pemerintah. Kalau operator swasta harus jalan sendiri, enggak mampu itu! Terpaksa, menerapkan sistem setoran, dengan segala konsekuensinya" (Ratax)

It is interesting that in term of the getting increase problems faced by the drivers in meeting their daily trip fees; one operator (respondent) said that following the increase in fuel price, the daily trip fee for their bus is also cut down, from Rp. 450,000 per day to only Rp. 400,000 per day –as part of their empathy toward the difficulties faced by their drivers (operator of Pahala Kencana).

In another side, the minim condition of the daily trip fee brings problem for the operator, as they could not renew the bus armada. It is aware that such condition could have serious impact to the passenger (comfort).

"with the present situation, thanks god if you still exist; for a business, actually, the public transportation is no longer profitable. So, the operators are now only trying to survive, as they have jumped in the business for so long; it is dreaming if you expect improvement from the service quality or armada renewal" (Kopaja).

"Dalam situasi seperti sekarang, dapat bertahan juga sudah syukur, secara bisnis, angkutan umum saat ini sudah tidak menguntungkan lagi. Jadi, orientasi pengusaha sekarang adalah hanya untuk bertahan, karena sudah terlanjur terjun ke dalam bisnis transportasi; mimpi namanya bila mengharapkan perbaikan kualitas pelayanan ataupun peremajaan angkutan" (Kopaja).

"Due to the increase in the fuel price, we have to cut down the daily trip fee, from Rp. 450,000 to Rp. 400,000 a day; if not, how can the driver survive if only taking Rp. 10,000 to their family. the decreasing trip fee is also related to the decrease in number of passenger who shift to using motorcycle" (Pahala Kencana)

"Sejak kenaikan BBM kita mengurangi setoran, dari tadinya Rp. 450.000,- jadi Rp. 400.000,per hari; kalau tidak gitu, kasihan supir, masak kita tega sih dia pulang Cuma bawa uang Rp. 10.000,-. Soalnya enggak ketutup, ditambah lagi jumlah penumpang turun, gara-gara motor" (Pahala Kencana)

3. OPINION, ATTITUDE AND EXPECTATION TOWARD THE REGIONAL GOVERNMENT OF DKI JAKARTA'S POLICIES ON PUBLIC TRANSPORTATION SECTOR

The route permits (*ijin trayek*) and Passenger Tariff are policies that largely considered by the operators (including PPD).

All respondents believe that the route permits for public transportation in Jakarta are not well managed and well planned. Oftentimes, the route permits are approved without conducting a deep comprehensive study. The route permits should be approved based on the settled mechanism, in which a new route permit will only be approved if under reasonable reasons it is not rejected by the existing operators. In reality, however, one can easily get a new route permit through collusion with the authorized parties. As result, for one route, we can easily find 2-3 different operators covering over 50% length of the route.

This over 50%-duplicating route for more than 1 operator, finally, will have negative impact to their business performance and business profits. Here, the public transportation company / operator will have difficulty in optimizing their armada for the permitted route (one permit for every 25 buses), and as the consequence, difficult to achieve the optimum profits. In another side, disadvantages will also on the user consumers. As illustration, with only 30% of route coverage, it will affect the bus driver to act 'brutally' just to pick up passengers (e.g.: race against each other, drop off or pick up passengers anywhere on the street).

"Ancol – Blok M is covered by 3 operators, including us; whereas permit for the route requires us to operate minimal 25 buses; In reality, however, we can only operate 14 buses for this route, not all. This is lessening its profitability, but what can we do about it. If we operate all (25 buses), they will have no passengers ride on" (Pahala Kencana)

"Ancol – Blok M ada 3 operator termasuk kami; padahal izin trayek untuk jalur itu, minimal 25 bis; pada prakteknya hanya 14 bis yang kami operasikan di jalur itu; itu

sebetulnya kurang menguntungkan; tapi mau gimana lagi, kalau dioperasikan semuanya malah bisa rugi, karena kebanyakan yang kosong" (Pahala Kencana)

Route permit attached for the (certain) bus also makes difficult for the operator to arrange their bus according to the need (passenger number). Such situation often leads to the accumulating number of passengers for certain routes, particularly during the peak hours.

"route permit is only for the bus, not for the company. So, when...for example ...our bus is broken down when riding on a route.. we can replace it with another bus from different routeHowever, because the route permit is only for the bus ...so, when 5 from 10 buses are broken, there will only be 5 buses operating ...as result, number of passengers heaps up ..." (PPD)

Ijin trayek melekat pada bis...bukan pada perusahaan.. jadi kita bisa misalnya. Bila .suatu ketika...bis-bis kita rusak di suatu rute.. bisa ambil dari rute lain...nah karena trayek melekat pada bis itu...jadi kalau disini misalnya 10 bis, rusak 5..ya 5 yang jalan...akhirnya apa?...penumpangnya berjubel-jubel..." (PPD)

Regarding the route permit, the operators expect that routes management is conducted only by a single institution, such as a consortium; in which every operator is a member.

In Shanghai-China, buses are owned by one institution ,like DLLAJ in Indonesia, nobody else. It manages and decides the routes for all buses. The revenue also comes to the institution, then to the government. It also distributes free cards for certain poor people, (just like for SLT in Indonesia)" (PPD)

"Di Cina, Shanghai, jadi bus itu , DLLAJ nya, yang punya perusahaan bis, perusahaan bis itu Cuma dia satu-satunya tidak ada yang lain. Semua trayek diatur sama dia. Kamu trayek ini, dia trayek ini, semuanya diatur. Pendapatan juga gitu, masuk ke dia semua, terus ke pemerintah. Bahkan dia bisa ngeluarkan kartu bebas. Ada orang-orang tertentu, kalau sekarang namanya apa sih, yang bantuan untuk orang miskin itu (maksudnya SLT)" (PPD)

Regarding the tariff policy, the private operators (non PPD) believe that the government has been unfair in dealing with the operators. The tariff ceiling and the obligation to offer special tariff for students are considered as a transfer of duty (from the government) to the private companies/operator.

"The tariff policy is unfair, why do we have to give Rp. 1,300 subsidy for every student; whereas more than 20% of passengers are students; it should be the responsibility of the government (to give the subsidy), funny isn't it, private parties give subsidy, every day, for public's interest" (Kopaja).

"Kebijakan tarif, tidak adil, masak kita yang harus mensubsidi pelajar sejumlah Rp. 1.300,- per orang; padahal jumlah penumpang pelajar pada Kopaja mencapai lebih dari 20%; harusnya itu jadi urusan pemerintah, lucu kan, swasta yang mensubsidi terus menerus, setiap hari, kepada kepentingan publik" (Kopaja).

"based on our calculation, the 100% increase in fuel price, yet with no proper regulation on route operators will affect to the bus tariff. It should be Rp. 2,500, so that we can earn same condition as in before the increase of fuel price. But in reality, we are only allowed to charge Rp. 2,000, including for toll ticket; this means that we have to give Rp. 500 subsidy for public,-" (Pahala Kencana)

"Sebetulnya dari hitung-hitungan kita, dengan kenaikan tarif BBM 100%, yang tanpa disertai regulasi operator trayek yang memadai, tarif bus itu harusnya Rp. 2.500,-, baru kita bisa memperoleh kondisi bisnis seperti sebelum kenaikan BBM. Tapi nyatanya kita hanya boleh menerapkan tarif Rp. 2.000,- karena melalui tol; nah artinya, sekarang ini kita dipaksa mensubsidi masyarakat sebesar Rp. 500,-" (Pahala Kencana)

The private operators believe that the application of emission standard test to meet the KIR test is only troubling the operators. It has no sense of crisis, due to the very rigid, intolerable application.

"Actually, we want our buses to meet the emission standard; for that reason, we continue to spend lot of money for repairing or maintenance, disregarding the crisis situation faced nowadays; sadly, we have tried to meet the standard, but with only minus 3% they still does not pass the KIR test; to some extent, be tolerant" (Pahala Kencana).

"Sebetulnya kita ingin bahwa emisi gas buang pada bus-bus kita sesuai dengan standard yang telah ditetapkan; untuk itu kita sering harus mengeluarkan uang cukup banyak untuk perbaikan atau perawatan; padahal kondisinya sedang sangat sulit seperti ini; yang menyakitkan, walaupun kita sudah berusaha mati-matian, tapi ada selisih 3% saja, dianggap tidak lulus KIR; harusnya ada toleransilah sedikit" (Pahala Kencana).

"It is no secret anymore, emission standard during the KIR test is not of our work. The important thing is that we are willing to payso it will pass the rest" (Ratax)

"Sudah bukan rahasia umum lagi, standard emisi pada uji KIR, tidak dilihat dari upaya kita, yang penting kita mau bayar....pasti diluluskan" (Ratax)

4. OPINION TOWARD TRANSJAKARTA, ITS OPERATION AND MANAGEMENT SYSTEM

Regarding the transparency and fairness issues, Operator respondents who join in Transjakarta consortium (Ratax, Steady Safe, PPD) tend to respond more positively toward Transjakarta consortium's corridor I, II and III system, compared to the non-member operators (Kopaja, Pahala Kencana).

A. STRENGTHS

The consortium-member operators believe that the Transjakarta consortium system has been implemented transparently and fairly, because:

- The policy socialization is considered quite adequate.
- The per-kilometer based compensation offered to the consortium has been calculated in a very transparent, and quite fair way. The per-kilometer compensation concept is also considered profitable, because the risk becomes very minimal for the consortium.
- Component of investment (bus purchase) and the operation cost are also determined transparently and fairly.
- The sole management (through the consortium) indicates a higher protection guarantee for the continuation of operators' business, not like the route management system currently applied.
- Good support of Information for business potentials (e.g.: number of passenger for the route).
- Priority of membership for operators whose routes are replaced by busway system.

- More secured welfare level for the employees (drivers and security person on the bus), because they do not need to meet the daily trip fee.

"In past, Jakarta transportation institution often contacted us, explaining the detail about the government's plan, about the consortium-form management system. The per-kilometer compensation offered to the consortium is also fair and transparent, because it is calculated in quite detail from the operation cost per kilometer for every bus, plus the profit margin. Through the system, actually, the operators are more protected from a possible loss, not like the past when we operated public transportation, it was very uncertain " (Ratax)

"Sebelumnya kita dipanggil berkali-kali oleh dinas perhubungan Jakarta, mendapat penjelasan secara rinci tentang rencana pemerintah kota Jakarta, tentang sistem pengelolaan melalui bentuk konsorsium, penentuan tentang kompensasi per kilometer yang diberikan kepada konsorsium juga cukup adil dan transparan, karena semuanya dihitung secara cukup rinci berkaitan dengan beban biaya operasional per kilometer untuk setiap bis, ditambah margin keuntungan tertentu. Dengan sistem ini sebetulnya para operator lebih terproteksi dari kemungkinan merugi, tidak seperti sebagaimana dialami selama ini dalam mengoperasikan angkutan umum, yang sangat penuh ketidakpastian " (Ratax)

"The decision is very fair, operators whose routes are 50% or above replaced by the busway get higher priority.....I think, the rule of play is very fair; for example PPD gets 18.87% shares in corridor I, because its 11 routes are closed and had to be rearranged" (PPD).

"Penentuannya sangat adil, operator-operator yang tergusur trayeknya sebanyak 50% atau lebih pada jalur busway tersebut lebih diprioritaskan.....saya kira itu aturan main yang sangat fair, seperti PPD sendiri, di koridor I punya saham 18,87%, karena ada 11 rute yang tersingkir dan harus ditata ulang kembali" (PPD).

"It is very transparent, for corridor II and III; in fact, we are free to choose buses (brand). The government only give one condition to us, the bus must be gas fueled and with automatic transmission. The brand is up to members of consortium.....we chose Daewoo, because the bus is cheapest and meets the basic standard settled" (Steady Safe).

"Sangat transparan koq, untuk koridor II dan III, bahkan kita diberi kebebasan untuk memilih bus, syarat yang ditentukan pemerintah Cuma bahwa bus tersebut harus berbahan bakar gas dan transmisi otomatis.mereknnya terserah anggota konsorsium.....pilihan kita memang jatuh ke Daewoo, karena itulah bus termurah yang sesuai dengan standard dasar yang telah ditetapkan tadi" (Steady Safe).

B. WEAKNESSES

It is aware that application of Busway transportation system should be reorganized more, namely in the term of:

- Size of the bus stop. Should be more adequate to accommodate the potential passengers, particularly during the peak hours, and for those who are transit to another traffic lane.
- Rearrangement on the public transportation routes for the bus armada that previously above 30% duplicated with the busway traffic lane.
- Disproportionate socialization.

- Apparently, socialization about the TransJakarta consortium system tends to be only toward operators whose routes are above 30% covered by the busway lane. According to operators of Kopaja and Pahala Kencana, they did not know anything about Transjakarta consortium system, and how to be members of the consortium.
- No adequate socialization and regulation toward the feeder operators.

C. OPPORTUNITIES.

Actually, for all operators (either member of the consortium or not), the sole operator system in form of consortium for operating Transjakarta through the special corridor (Busway) is the answer to deal with the current need. The Transjakarta (Busway) consortium is considered as solution for overcoming the serious problems faced by operators due to the getting tight competition in public transportation service sector.

Transjakarta consortium concept through the Busway corridor is considered to give higher business certainty and also more controllable costs for the operators in running their business (certainty in income and expenses).

For this reason, the non-Transjakarta operators are very enthusiastic to join in the consortium. They are aware generally that without a breakthrough as in the consortium concept, their business will go more difficult from time to time, or even bankrupt.

- *"I really want to become member of the consortium. Although the profit is smaller, but it is certain. It's even more profitable because we can reduce the unpredictable cost. The current transportation system is very risky; the risk to crash to private cars, illegal levies, unofficial budget for police officers; By becoming a member of Transjakarta consortium, we can be free from those negative acts. Bus runs on special traffic also lane. The government also supports" (Kopaja)*

"Saya ingin sekali ikut jadi anggota konsorsium, walaupun mungkin keuntungannya lebih kecil, tapi pasti, kalau dihitung-hitung malah bisa jadi lebih menguntungkan, soalnya kan beban biaya tak terduga bisa lebih ditekan. Dengan sistem angkutan yang ada saat ini, beban resiko sangat tinggi, resiko nyerempet mobil orang, resiko pungutan, setiap pos polisi kita harus anggar, kalau tidak nanti dipersulit; kalau konsorsium Transjakarta bisa bebas dari rongrongan negatif itu, jalurnya khusus, didukung pemda lagi" (Kopaja)

- *"all street in Jakarta should be made like the Busway. We, the operator, won't be distressed, not like as in the present" (Pahala Kencana).*

"Sebaiknya sih, semua jalan di Jakarta dibuat seperti Busway itu. Untuk operator, kita mungkin tidak sewaswas sekarang ini" (Pahala Kencana).

- ***“Actually, it feels like fresh blood for operators who are now dying; we get two sources of income, from the consortium and from the feeder support. So, we highly support the Busway program” (Steady Safe).***

“Sebetulnya ini seperti darah segar bagi para operator yang sudah sekarat saat ini; kita dapat dua sumber penghasilan, dari konsorsium dan dari feeder support. Jadi, kita sangat mendukung program Busway” (Steady Safe).

D. THREATS.

Regulations that allow the operators to relocate their buses from the deserted routes to become feeder support, or even to establish a new route could cause new problem (if they are not well managed), namely the getting worse traffic jams at the feeder support lanes due to the accumulating number of public transportation tool outside the busway lane.

Another threat also comes from very strong subsidy paradigm among the operators who join Transjakarta consortium. If the paradigm remains and could not be wipe out little by little, and there is no rigid regulation on the service standard; so it is of our concern that when the subsidy is revoked, the service standard to consumers will decrease significantly. As the result, the consumers will shift back to using their private cars/motorcycle, and the private car usage will increase again.

Bad liquidity of the ticket at the feeder support level. The feeder ticket can only be cash out within three weeks to 3 months (initially, 1 week only), which in turn can lessen the feeder’s support to the ticketing system. This situation will automatically cause to fail the incentive program previously planned by Transjakarta in increasing the public transportation usage instead of private car, particularly motorcycle, usage.

- ***“Profit Margin from public transportation business such as bus is very small. If the government give no subsidy...like now.. it will be difficult to increase and maintain the service quality” (Ratax)***

“Margin keuntungan di transportasi publik seperti bus itu kecil sekali, jadi kalau tidak disubsidi pemerintah seperti sekarang ini, sulit untuk meningkatkan dan mempertahankan kualitas pelayanan” (Ratax)

- ***“In past, the feeder could cash out the ticket within one week; now, it can take 3 months; more troubling for the operator! That’s why a number of armada reject the ticket, because it’s only troubling our financial liquidity, in the midst of the increasing amount of operational cost” (Kopaja)***

“Dulu karcis, dalam satu minggu bisa diuangkan oleh feeder; sekarang bisa sampai 3 bulan, tambah susah buat operator! Makanya banyak armada juga menolak menerima karcis; soalnya menyulitkan likuiditas keuangan kami, ditengah-tengah beban biaya operasional yang semakin tinggi” (Kopaja)

- ***“for the deserted buses, we are allowed to propose for route changing, in which the contacted route with Busway route is lesser than 30%. Still, it is problem, because all of the existing routes is already occupied by public transportation vehicles. The route management is also complicated. Initial idea was that an unfilled rout was served by mikrolet. If it got crowded,***

Metromini or Kopaja could replace it. And if more crowded, it would be replaced by buses. The practice, however, is not like that, well... hard to point the finger at, who will withdraw their armada from the crowded lane. So, the shifting in the deserted bus route could worsen the traffic.....that's why the feeder support should also be managed by one single body only, such as Transjakarta consortium" (PPD)

"Untuk bis yang tergusur, kita boleh mengajukan peralihan trayek, dimana singgungannya dengan Busway kurang dari 30%, Cuma repotnya memang jalur-jalur sekarang ini sudah dipenuhi semua oleh angkutan umum, penataannya juga semrawut. Ide awalnya harusnya untuk jalur yang masih sepi, diisi oleh mikrolet, kalau lebih ramai sedikit, diganti oleh Metromini atau Kopaja, dan kalau sudah lebih padat lagi, diganti dengan Bis. Tapi pada prakteknya enggak begitu, ya...susah disalahkan juga ya, siapa yang mau menarik armadanya kalo jalurnya sudah padat. Nah, sekarang peralihan trayek dari bis yang tergusur Busway itu bakal tambah memacetkan jalur.....makanya feeder support juga harusnya dikelola oleh satu badan saja, seperti konsorsium Transjakarta itu" (PPD)

CONCLUSION

It appears that condition of public transportation in Jakarta is getting complicated. For over one decade, the consumers have never accepted a comfortable, secured and fast service from public transportation at all. In fact, the increasing number of public transportation operators in Jakarta also can't trigger the competition among the operators to offer the best services for the consumers.

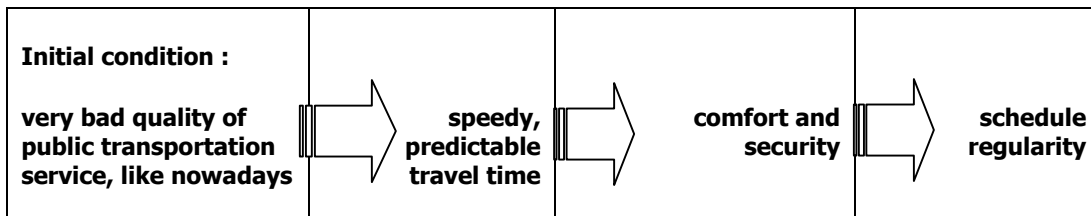
In another side, Busway concept has been greatly positively responded by either the user consumers or the public transportation operator.

- For the user consumers, the busway concept has met their expectation toward the availability of a quick, affordable, secured and comfortable public transportation facility. They believe that this concept is significantly far better than the existing public transportation modal. Aspects need to be improved urgently are the bus availability during the peak hours, the passenger loading capacity for bus stop, the complete facility at bus stop, and the longer operation hour until 24.00 o'clock.
- For public transportation operators, in another side, the Busway concept along with the sole management system through the consortium format is considered as the right answer for dealing with the current need. They believe that this concept will help the operators to overcome the getting serious problems in operating public transportation business from time to time. That's why, for operators who are not yet joining the consortium, their willing to join in the consortium is very high.
- The common management concept such as Transjakarta is expected to be also implemented for feeder support management.

Based on this study, there is strong indication that the busway concept is quite effective for slowing down the growth of private vehicle usage in Jakarta, and is more effective if the concept also covers the parking facility for private cars at the main terminals. The one time payment ticket with a flat tariff for all destinations is considered very interesting. It is only, however, if the accumulated number of passenger during the peak hours or at the meeting point is not handled appropriately (namely through the adequate facilities at the bus stop, more accommodating size of the bus stop, line-up management for potential passengers to

enter the busway, and the availability of Transjakarta armada), potency for Transjakarta user customers to change back to their private vehicle usage, particularly motorcycle, will be increasing.

This study also discover upgrading process, related to the aspects of service demanded from public transportation (important attributes), as follows :



Regarding the tariff, it is potential to become barrier for the public transportation users to change to motorcycle usage. Therefore, if not carefully considered, the Busway concept will not be effective for slowing down the growth of motorcycle usage.

RECOMMENDATION

The study shows a strong indication that the increase in service quality can only be achieved if there is policy that can protect the interest of both parties, the consumer and the operator.

From the aspect of user consumer protection, there should be an audit standardization policy toward the public transportation service quality; in which the route permits or the incentive programs are only granted to operators who pass the audit. Application of the policy, however, will be unfair, if it takes no notice of the operator's interest. No matter what, the increase in service quality will be hard to appropriately apply by operators, if it does not accommodate with a policy that protects the business prospects of the operators. So, it is reasonable if subsidy tariff for students is not charged to the operator, but to the regional government. Technically, the subsidy can be applied through the student ticketing system, in which the operator can be reimbursing the student ticket at the normal price to the government.

In the crowed management condition of public transportation facility, the application of public transportation management system through 1 (one) consortium operator –either for regular public transportation modal or for the feeder support –will be quite effective to bring a better service quality to the consumers; and to protect business prospects of the operators.

The guarantee of faster travel-time with the very reasonable cost (lower than if using the private car or similar with if using a motorcycle) is a promise that can be quite effective to increase the public transportation usage.

To make the application of busway concept effective for increasing the public transportation usage, there should be a review on the bus stop facility first, rather than on the other supporting facilities. It needs to conduct a deeper evaluation toward the space of bus stop at each crossroad point, in order to build a proper bus stop with adequate capacity. Availability of toilet at the bus stop, and the line-up order are facilities that urgent to make.

End of report

SCOPING SESSION REPORTS

Transportation Department

Scoping Session Report

Department of Transportation

DKI – Jakarta

Meeting With

Mr. Pristono, Deputy Director

John Ernst, with Darmaningtyas (Instran), Andi Rahmah (Pelangi)

5 January 2006 13:30-16:30

Status of Projects Relevant to GEF

Corridors 2 and 3 are ready to open and will begin service on 15 January. Corridor 2 is 14.3 km; corridor 3 is 18.7 km. Initial operation will be at a reduced level of service, because sufficient buses are not yet available. There will be only 8 CNG (compressed natural gas) buses initially, but they expect 71 to be in service by April (implemented gradually). The Corridor 3 depot is finished, but they are still waiting for a high-pressure CNG pump. The pump will be ready in April, until then they will use private, low pressure, CNG pumps.

For Corridors 4-7, which will be constructed in 2006, they have already determined the exact routing for corridors. Public resistance is much less now; people are more receptive.

Mr. Pristono and Mr. Ajar (at TransJakarta) are the primary people doing the public relations for the busway. This is because the press goes to both the Transportation Department and TransJakarta for information.

Budget Commitments

For Corridors 2 & 3 the Transportation Department spent 200b rp (US\$2.2m) for bus stops, pedestrian bridges, lane separators, colored asphalt for portions of the lanes, and the ticketing system. The ticketing system expenses were 10m rp (\$US 1100) for the 3rd corridor and 15m rp (\$US 1600) for the 2nd corridor. [figures need to be re-verified]

These amounts do not include the Public Works or Parks Department budgets. Includes 20b for Harmoni central bus station and the 2 busway lanes there (one overtaking lane in each direction) which are cantilevered over the canal.

Needs

Mr. Pristono identified that the most important need is for the Transportation Department staff to go to Bogotá and other cities for training. The engineers need classroom training in the details of bus rapid transit systems including:

- infrastructure design
- bus specifications,
- transit-oriented development principles.

DisHub staff that need training include those involved with:

- Bus specification
- Bus depot - maintenance/repair (Pul)
- Infrastructure (for bus stop)
- Planning of traffic flow
- Route selection

A two-week class would probably be the ideal length of time. JE asked if the Government could budget to share the costs of this training. Mr. Pristono responded that it would be complicated administratively to do this.

Additional needs related to the busway that Mr. Pristono would like considered for GEF financial support are:

- Hardware for tracking system (GPS and control room). This is difficult for the city budget because have to buy all at once.

- Bus priority system

- System information for passengers: time to arrival and other variable message signs in stations

After discussion with Mr. Tyas of Instran, Mr. Pristono said it would also be possible for the Transportation Department to support improvements for bicycle facilities as a feeder mode to the busway.

Follow-Up

The Transportation Agency will write a letter requesting training and showing their commitment to the training in terms of paying for staff time, selection of appropriate staff, and requiring a report of what was learned.

Public Works Department

Scoping Session Report

Department of Public Works

DKI – Jakarta

Mr. Yudi, Transport Section, Public Works Agency

with his staff: Mr. Gatot

John Ernst, with Darmaningtyas (Instran), Andi Rahmah (Pelangi)

6 January 2006 17:00-18:30

Status of Projects Relevant to GEF

BUSWAY

Final routing for busway corridors 4-7 is already decided. Public Works will do detailed designs for corridors 8-11 this year. Final routing is not yet decided for those corridors. The routing is complicated because there are plans for several new toll roads in Jakarta; many overlap the proposed busway routes. (Public Works has made conceptual drawings of a toll road above a busway, and also one with monorail in between the busway and elevated toll road.) Mr. Yudi provided us with a table of all the planned busway corridors as prioritized by the official transportation plan, and also showing the variations as interpreted by different government agencies.

KOTA PEDESTRIAN AREA

The Governor ordered that the pedestrian area should be created with his discretionary funds. Like the busway, it is now part of the Governor's legacy. Detailed design is due by March. Public Works has not designed such a pedestrian area before. Concept still needs to be developed. They would really like to have assistance with the old kota pedestrian plan.

Budget Commitments

BUSWAY

In 2005, Public Works spent about 96b rp (US\$10.7m) related to busway corridors 2 & 3. In 2006 will build 4, and do the detailed design for 4 more corridors. 15 corridors are scheduled to be built by 2010. For budgeting, they are using the same cost per km estimate for all the corridors.

PEDESTRIAN AREA

Public Works has a 12b rp (US\$1.3m) budget for 2006. This is largest portion of the total budget to all agencies.

Follow-Up

Mr. Yudi said he could obtain a letter from the Public Works department head stating the budget expenditures for the busway and the kota pedestrian area. This would take about 3 weeks to process.

John asked if there was any part of busway that they wanted to build but didn't have enough money, possible for UN support. Mr. Yudi couldn't think of anything, but he will keep this in mind.

Parks Department

Scoping Session Report

Department of City Parks

DKI – Jakarta

Meeting With:

Mrs. Sarwo Handhayani, Head of Department

Also one Parks Department staff person

With Andi Rahmah (Pelangi), Darmaningtyas, Nikmah (Instran)

5 January 2006 15:00-16:30

Status of Projects Relevant to GEF

The City Parks Department has responsibility for sidewalks in Jakarta. They initiated a program to improve the sidewalks around the busway terminals, and plan to continue this effort, though the current budget limits them to about 10km of 6m wide sidewalk each year.

They did implement sidewalk-like pavement on some crosswalks on Thamrin Avenue at the "Landmark" (Dukuh Atas). They were planning a raised crosswalk on a side road that serves as the entrance to a larger development along Sudirman (across from the Hilton hotel). Owner of the development objected saying that it would cause cars to have to queue. They have to discuss with the building owner to get their permission.

Corridor 2 does not have many overpasses. They are planning to put in at-grade zebra crossings with fences to force pedestrians to cross there.

Last week the Governor approved a plan to put in pedestrian-only streets in an area just north of kota station – along the river (Kali Besar), and around the Plaza Fatahillah.

Budget Commitments

The department has a budget for 10b rp (US\$1.1m) each year for pedestrian improvements, which they are focusing on areas around the busway. The budget for the Plaza Fatahillah pedestrian area is at Public Works, which is also dealing with drainage and cabling in the area.

Needs

They are limited in some areas because the right-of-way is not available. Pedestrian right-of-way is determined by the Public Works department, not by the Parks Department. The Parks Department authority is limited to what goes on the surface.

Mrs. Yani said it would be very useful to have an expert to do an analysis of pedestrian needs for the Plaza Fatahillah pedestrian area development.

Scoping Meeting Report

Project: PDF –B GEF Transport Project for Jakarta.

Location: Jakarta, Indonesia

Dates: 20 January 2006

Local Environmental Agency (BPLHD)

20 January 2006 – Ir. Kosasih Wirahadikusumah (Head of BPLHD)

- with Andi Rahmah (AR), Nugroho (Pelangi)

AR started by explaining about GEF Project in Jakarta that initiated by ITDP and its local partner Pelangi and INSTRAN to Pak Kosasih. AR also explained about PDF B phase activities, which is one of those activities is scoping study to get input about their program which related with sustainable transport project on 2006 and what potential projects between 2006-2011.

Bylaw about Clean Air in Jakarta

Bylaw about clean air (Perda no.2/2005) in Jakarta would be enter into force on February 2006 .

Actually, BPLHD doesn't have "real" budget for implementation since its role as coordinating agency for other technical agency such as Dinas Perhubungan, Dinas PU, Dinas Pertamanan, etc.

For Blue Sky program in 2006, they proposed budget about \$ 700,000.00. On this program including program to endorse compliance to utilize CNG for public transport vehicle in Jakarta.

For implementation of Urban Environmental accord (UEA), they would get budget about \$300,000.00 in 2006. The activities of implementation UEA would be develop data base as baseline data for 7 sectors including transport sector and established project management unit for this programme.

BPLHD agreed to give soft copy of their series data about vehicle emission to Pelangi for this project as their support to our activities to calculate GHG emission in Jakarta.

For potential project 2006-2011, Pak Kosasih seems doesn't interest to think about that since he will be retired this year. He suggested Pelangi to have meeting with his staff which is potentially would be replaced his position.

Next step:

- Meeting with BPLHD and collecting emission vehicle data would be at mid of February 2006.

Scoping Meeting Report

Project: PDF –B GEF Transport Project for Jakarta.

Location: Jakarta, Indonesia

Dates : 3 February 2006

Time : 10.15-11.30

Meeting with:

Agus Subardono-AS (Deputy Head of Dinas Tata Kota), Haryadi, Budhiyakto, Mangara, Darmika

- with Andi Rahmah (AR), Nugroho (Pelangi), and Thawaf (Instran)

AR started by presenting about GEF Project in Jakarta that initiated by ITDP and its local partner Pelangi and INSTRAN to Dinas Tata Kota folks. AR also explained about PDF B phase activities, which is one of those activities is scoping study to get input about their program which related with sustainable transport project on 2006 and what potential projects between 2006-2011.

Result:

AS stated that Dinas Tata Kota act as planner agency. So, they only did large scale planning. Therefore he ask about a possibility to request study about review transportation plan in Greater Jakarta for one of our activities on GEF project. The result of this study would be utilize for spatial planning in Jakarta, for example to implement transit oriented development concept in Jakarta.

Mangara stated that what happened on corridor 2 & 3 show us that we should doing analysis of trip generation in Jakarta. As a result, he asked us to do study to provide data about existing traffic generation in Jakarta, data and analysis about the reason of declining Level of Service of road network in Jakarta, and data about impact operating the new mode of transportation e.g subway and monorail on traffic generation in Jakarta.

Darmika ask for Technical Assistance to support better spatial planning for street vendor, so it would eliminate side friction and conflict spatial with pedestrian.

Budhiyakto want to review the result of ITDP study about public transport demand and he asked for software for transport planning like Emme 2 and training to utilize the software. I told him that currently we know about other software which can be like Emme 2 but more user friendly. He seems interesting with that software.

AS suggest Pelangi to meet with Bappeda after this meeting

ITDP Mission Report

Project: UNEP GEF PDF-B

Location: Yogyakarta and Jakarta, Indonesia

Dates: 18-24 December 2005; 2-7 January 2006

ITDP Staff Present: John Ernst (JE)

Report by: John Ernst

Report date: 12 February 2006

Summary

Objective	Result
Jakarta	
Identify projects that could qualify for GEF support, assessing level of commitment and funding outlays	The Jakarta busway is expanding ahead of schedule. Two new corridors open on 15 January 2006. Four additional corridors are scheduled for construction during 2006. The next 4 corridors will have detailed designs made in 2006. A pedestrian zone will be built in the Kota area in 2006
Identify potential areas of additionality to ongoing projects suitable for GEF support	Conducted discussion sessions with 4 agencies. Government is in a "learning by doing" process for the busway. Additionality can be achieved with measures that increase busway capacity and ridership. Training was identified as a key need. Some potential for technology improvements in operations, management, and passenger information. Expert assistance valuable for some areas in busway, and for most aspects of pedestrian area development.
Hold second meeting with stakeholders on GEF project	Meeting arranged and conducted by Jakarta Planning Department
Develop working plan for GEF Full-Size Proposal preparation with NGO partners.	Discussed and outlined tasks and memorandum of understanding with Instran and Pelangi.
Yogyakarta	
Hold initial meeting with stakeholders on GEF project	Meeting arranged and conducted by PUSTRAL with government, academic and NGO participation.
Develop working plan for GEF Full-Size Proposal preparation with NGO and academic partners.	Discussed and outlined tasks and memorandum of understanding with Instran and PUSTRAL.
Make initial preparations for non-motorized vehicle (becak) promotion at Better Air Quality	There is potential for establishing becaks for internal transport of tourists at Borobodur monument, though social aspects appear tricky. Becak production is slow, but not an

Next Steps

- Implement working agreements with project partners, initially: Pelangi, PUSTRAL, Instran
- Identify and contract experts to come to Indonesia in February 2006
- Focus groups to be conducted in January under direction of Pelangi
- Preparation for busway passengers survey to be conducted in February by Instran with assistance from Arthur Szasz

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Acronyms

AID	US Agency for International Development
BAQ	Better Air Quality conference, by Clean Air Initiative-Asia
CDM	clean development mechanism
CNG	compressed natural gas
GEF	Global Environment Facility
GHG	greenhouse gas
Instran	Transportation Studies NGO
ITDP	Institute for Transportation & Development Policy
JE	John Ernst
MOU	memorandum of understanding
Pelangi	Environmental NGO, Jakarta: Yayasan Pelangi Indonesia

PPD Jakarta public bus company
PUSTRAL Centre for Transportation Studies, Gadjah Mada University
UNEP United Nations Environment Programme

-
- Notes from the meetings below are summarized from those taken by John Ernst during the meeting. They are subject to expansion, correction or clarification by the other parties involved.

Jakarta Notes

Steering Committee Meeting

21 Dec – Chaired by Hasan Basri, Planning Department

[see minutes from Planning Department – in process]

Additional Notes

- Hasan Basri recommends that any funds to support the city not go through the Government, but instead through a separate account. Funds should be provided directly to contractors for specific projects approved by both the Government and ITDP/GEF.
- The Government's 2006 budget will be finalized in the next few days. The busway construction amount, for 4 additional lines, is about US \$85m.
- The next 5-year Strategic plan (for 2007-2011) will be developed in 2006. This will be for the next governor. Governor Sutiyoso shall step down in October 2007. He is probably not eligible for re-election.
- Agus Purnomo, GEF Focal Point for Indonesia, said that if UNEP was encouraging getting the application in under GEF-3, then to go ahead and proceed. He would approve the application for GEF 3 funds.

TransJakarta: Mr. Bambang Gardjito, Head

19 Dec 11:00

Bambang Gardjito (Head) & Taufik Adiwianto (Director of Operations)

- NOTE: a scoping report was not prepared for TransJakarta. They are currently excluded from planning expansion of the system and are preoccupied instead with day to day operations and management. The needs identified are of a short-term nature, not suitable to the GEF Full-Size Proposal.
- TransJakarta is planning to implement a video control system to improve spacing of the buses.
- The TransJakarta basic fare was increased to 3500 rp (US\$0.39; up from 2500rp or US\$0.28) in October following the gas price increase. A flat fare system will be used initially when corridors 2 and 3 are added in January 2006. They are considering use of a zone-based fare, and would appreciate an expert analysis of this before presenting the concept for approval.
- The buses on corridors 2 and 3 will operate on compressed natural gas (CNG). There will be a total of 72 CNG buses in operation by April. (Seventeen diesel buses will be borrowed from Corridor 1 to allow initial operation of the new corridors in January.) TransJakarta would

like to be able to have a training of the private operators on fueling and maintenance of CNG engines.

- The Governor has directly specified that each corridor should have uniquely colored buses – red on corridor 1, blue on corridor 2, and green on corridor 3. This has prevented them from considering bus routes which go directly from one corridor to another without requiring a transfer.

Transportation Department: Mr. Pristono, Deputy Director

5 Jan 12:00 with Tyas and Rahmah

[see Scoping Session report in Annex]

Additional Notes

Busway Corridors 2 & 3

- For corridors 2 & 3, the government's payment for the bus is only per km; there is no support in purchasing the CNG buses required on these corridors. The new bus company is called "TransBatavia", made up of a consortium including Mayasari Bakti, Steady Safe, PPD, and Metro Mini. Even though Metro Mini is an owner's cooperative, they are buying 5 buses.
- Now many companies are offering to participate in the busway. The government is giving the first opportunity for bus operation to the companies that have routes along the corridor.
- The routing for some portions of next 4 corridors is under debate. This is not dependent on technical, but instead on political and social considerations. Technical input is not useful at this point; they have enough already. Also for mixed traffic intersection design, they prefer to learn by trial and error. They like BRT for this ability to make changes.

CNG 3-Wheeler Taxis

- There is a program involving Bajaj (the manufacturer) to change Jakarta's 3-wheeled Bajaj taxis to new 4-stroke vehicles with CNG engines. The company is offering to accept the old vehicles as downpayment, with the owner than making monthly payments. The government's role has just been to supervise and encourage this. Drivers are motivated to participate by the cheaper price of CNG.

Modifications to Busway

[20 Dec JE meeting with Pristono]

- Considering change to articulated buses for additional corridors. Busway stations can be readily modified to a multi-door design because of their metal construction.

Mrs. Rini, Head of Planning Section

20 Dec 16:00 – with Tyas, Rahmah, Nikmah

- Mrs. Rini successfully made Quality of Service contracting a "dedicated program" of Mr. Nurrochman, Head of the Department. While this could apply to all buses, the concern is mostly for taxis, especially as a way to protect women passengers. In the future, she may become more involved with licensing for both taxis and buses, though probably not trying to take on the bus cooperatives (Metro Mini and Kopaja).
- She would be interested in having modeling capacity in her department, though she doesn't like Emme/2. A more user-friendly program would be suitable.

- She said she would support our effort to conduct a survey on TransJakarta and would write a letter to request authorization.

Public Works Department: Mr. Yudi, Transport Section

6 Jan 17:00-18:30 with his staff: Mr. Gatot; Tyas and Rahmah

[see Scoping Session report in Annex]

Parks Department: Mrs. Yani, Head of Department

5 Jan 15:00-16:30 - With Rahmah, Tyas, Nikmah; plus one Parks Department staff

[see Scoping Session report in Annex]

Jakarta Old Kota Association

Business Association

Mr. Jacky, Ketut Budi, Andre Rusdi
with Rahmah and Tyas, at Plaza Glodok office
5 Jan 2006 11:00

- This association is a sub-group of the Jakarta Oldtown Kotaku organization. They represent the businesses in the area and are concerned about traffic and street vendors. The proliferation of street vendors has caused many shops to go out of business. There are some thriving areas, such as a small street off of Pancoran that is famous for traditional foods such as noodles. Now that the busway provides an option for getting to this street from Sudirman without being stuck in traffic, Chinese businessmen in Jakarta go there for certain traditions like eating noodles at 10:00 am.
- They told us of a government plan to put a pedestrian area in near Plaza Fatmahillah. For this proposal, they favor allowing some local traffic, adding parking and traffic calming, instead of an outright closure to motor vehicles.
- In the Glodok area in general, they favor the non-motorized bicycle taxis to the motorcycle taxis, feeling that it is more interesting and compatible with the character of the area. They would prefer to see the drivers using uniforms to improve the image of the service.

Jakarta Oldtown Kotaku

Mr. Andre Rusdi, Ms. Winda Siregar, Mr. Deddy
With Darmaningtyas, Nikmah, Andi Rahmah
6 Jan 14:00

- The association is made up from the local community in the old center (Kota) of Jakarta. They have MOU's with 5 private companies iterating their common value. Bank Mandiri is an especially strong supporter. The Executive Board is chaired by Mrs. Miranda Goeltom, Deputy Senior Director at Bank of Indonesia. (The Governor is listed as a "patron", and the Vice-Governor is on the advisory committee.)
- The Executive Board is composed of the following individuals and their specializations:
Miranda Goeltom = Arts & Culture
Gilbert Wiryadinata = Social and Community Participation
Ella Ubaidi = Living in the city
Farid Harianto = Economic & business Development
Shanti Poesposoetjipto = Infrastructure (including river cleaning, traffic arrangement, public

transportation)

Budi Lim = conservation & revitalization

Pingki Elka Pangestu = Legal & Urban management

- Private companies have made contributions for certain projects. Nokia provided 250m rp (US\$28,000) for new trash cans. HSBC paid 100m rp (US\$11,000) for a river cleanup project. There is a sponsor for helping to develop the pedestrian area, and they say that the businesses that own properties in that area are ready to renovate the properties if the pedestrian area is implemented.
- A Dutch-funded historical preservation project is providing 1b rp (US\$110,000) for work in the area.
- A significant problem seems to be with street vendors (PKL). However, the association managed to remove vendors from Pancoran Street. (From our own observations, someone is also keeping Plaza Fatahillah from being filled with vendors.)
- They would be interested in a presentation from an expert familiar with pedestrian areas that have been developed in other countries.

Additional Meetings

Bambang Susantono, Finance Ministry

[Bambang is the former coordinator of the independent advisory body for ITDP's work in Jakarta that was funded by AID.]

21 Dec – Informal meeting with JE

GEF Project

- Bambang urged that we include trips for NGOs and media to other cities where BRT is done right, to keep the promise of BRT alive in Jakarta.

Administration of GEF Grants Directly to the City

- Bambang recommended, as a viable mechanism for administering direct funds to the cities, the establishment of a central project management unit (PMU) with full-time staff. A PMU is a legal entity in Indonesia, and so could be audited. Staff might include a director, accountant, bookkeeper and lawyer. Bambang could help us set up a PMU. We would also need a smaller, Project Implementation Unit (PIU) in each department where we work. The PIU also would require a set of full-time staff. Usually the government can provide the office space and basic staff (office mgr, office boy), but we would provide the professional staff. Fiscal control would come from the audited PMU, a 5-6 person advisory committee, and a separate committee to oversee proposals.

Pelangi and Intran: Discussion of GEF Proposal

Pelangi: Andi Rahmah, Mr. Nyoman (new program manager), Mr. Nugroho (new communications person)

Intran: Tyas, Nikmah

19 Dec 1:30-3:30pm

Emissions Model

- Pelangi has developed an emissions model for the transportation sector that can output greenhouse gas emissions. Rahmah is able to provide emissions data from Swisscontact's work.

Focus Groups

- Target audiences for focus group discussions are: busway passengers, public transport passengers not using the busway. Smaller groups include bus operators, and particularly feeder-

bus operators. The most difficult part is in identifying, contacting and screening participants. A private company can be contracted to help with this. Rahmah prepared a draft plan for the focus groups for discussion (Series of FGD.doc).

Workshop

[20 Dec discussion with Tyas]:

- Intran is developing a transportation seminar with Trisakti University. Dr. Trisbiantara, of Trisakti University, is on the Jakarta Transportation Council and a sponsor of the workshop. In addition to ITDP funding through the GEF, Swisscontact will also support the workshop. The workshop can be used to get public input on the busway and other aspects of Jakarta's transportation for the GEF proposal. Tentative date is February 23 or 24.

EcoSecurities – Agus Sari

6 Jan – with Rahmah, Tyas, Nikmah

- EcoSecurities is 55% owned by Pelangi. Agus Purnomo works here part time. EcoSecurities has a project now with MATI (Japanese Technical Institute), with support from Mitsubishi, to develop a CDM-usable GHG calculation method for transportation. They have been working on this for 3 months and expect to have results in March. Their approach is to get a transportation model acceptable to the CDM for predicting emissions and comparing alternative schemes. Mr. Nyoman at Pelangi is working on this project.

Corridor 2 & 3 Observations

[JE while attending trial run of new busway corridors, 20 Dec]

- The new buses were light blue with CNG engines from Daewoo. The door width is similar, about 1.8m, but has changed to a sliding design. The door takes about 4 seconds to open. The interior features an area of folding seats to accommodate space for a wheelchair passenger. The rear emergency exit does not appear to have stairs, requiring a jump down to street level. The front exit emergency exit has steps.
- Mrs. Yani, Head of the Parks Department, told me a net of 300 large trees were lost during construction of the 2nd and 3rd corridors.
- Mr. Benhard, Infrastructure Section of the Transportation Department, told me they began placing the lane separators for the second and third corridors on 17 Dec. In three days, they were 90% complete.

Yogyakarta Notes

Yogyakarta GEF-Preparation meeting

4 Jan 9:00-12:00

Hosted by PUSTRAL – Prof. Danang Parikesit

[a report has been prepared by PUSTRAL]

Additional Notes

- Mr. Setyoso, Head of the Yogyakarta Province Transportation Department was interested in the possibility of an outright subsidy to bus fares. JE said this wouldn't meet GEF criteria because it is not sustainable.

- Mr. Tri Harjun, Head of the Provincial Public Works Department: After viewing information on the Marakina bikeway in Manila, he suggested that targeting a bikeway to schools is a good idea. School children are too young to use motorcycles; public transport security is not good for students. Suggested a project to provide for bicycles in the streets – not just regulations, but also physical infrastructure only for bicycles. The idea would be to make less space for motorcycles, and use enforcement to make sure motorcycles don't use the road space set aside for bicycles. JE suggested this could fit well with the safe-routes-to-school program that Instran has been pursuing for the past year with various schools in Yogyakarta.

PUSTRAL

Danang, Heru Sutomo (Vita and Cholis present)

22 Dec 4:30-6:30pm

Proposal Development

- Timing is difficult for the proposal because the mayor is up for re-election in April and is unlikely to commit to anything between now and then. It looks to be a difficult re-election for him. Danang thinks we should have a launching workshop to get the government's commitment.

Status of Relevant Yogyakarta Projects

- **Pedestrian Area on Malioboro Street:** The MOU between the city and the developers ended. There is confusion over provincial government ownership of the land, which caused the MOU between the city and the private developers to be insufficient. They are now developing a new MOU to include the Province. The City budget no longer includes money for the pedestrian mall because of the private funding promise. The Malioboro project has passed through 2 stages of screening for receiving support from the World Bank funded private-public partnership (KKPPP). It is now one of the top 6 projects being reviewed. Overall, there is still strong support for pedestrianizing Malioboro, though the parking lobby is still resisting.
- **Road pricing:** PUSTRAL has completed a study for the city. The city government is waiting for the public to react to the possibility of a road charge. The city government wants PUSTRAL to socialize the road pricing. They will need to make a big effort to get the concept of road pricing accepted by some of the public

Becak Modernization

Production

19-20 Dec: various conversations with Cholis, Tyas, Jufri, Heru

- The modernized becak operators have not reported any significant difficulties with the becaks in recent months. There have been a few repairs made, but these were not from any design problem (possibly from accidents).
- Production of modernized becaks in the workshop is slow, producing on average about 2 becaks per month. The continued lack of a shop manager appears to be a major obstacle. JE advised that the continued subsidy for production costs from ITDP will be stopped. Direct salary for the workers will be provided until the end of February 2006. Beginning in March, production at Instran should be supported by sales of the becaks.

24 Dec: Jufri & Tyas

- There was a technical problem with the revised becak design in that the chain-stay was too wide. Jufri is quite sure this was just an oversight in the construction of the prototype. It caused the crank to hit the chainstay and had to be corrected on the models built.
- Current becak price is 2.2m rp; materials cost is 1.4m; other costs = 0.5m. Jufri expects materials prices to increase by 25% at the start of 2006.

Marketing

22-23 Dec: Conversations with Gilang and Cholis

- They have not been successful with efforts to market to hotels. The hotels have not been interested in buying, or supporting the purchase of, becaks because normally they only pay for painting the becaks provided by the drivers.

Meeting with Marketing person for Parambanan/ Borobodur

- Note: At JE's request, Gilang contacted the management of the Borobodur and Parambanan monuments to ask them to consider use of becaks at Borobodur. Previously, the Center for Tourism Studies at Gadjah Mada University (PUSPAR), accompanied by Heru Suryono, attempted to convince them to use becaks at Parambanan. This was not accepted, possibly due to the rough roads at Parambanan.

Mrs. Chrisna

4 Jan – with Gilang, Cholis, Heru, Tyas

[Note: an additional meeting summary is available from Gilang]

- Mrs. Chrisna was concerned that there are too many visitors for becaks, and that transportation by becak will be too chaotic.
- JE suggested a trial operation to assess the ability to control the becaks and also the capacity of a becak system. Mrs. Chrisna is interested in having a trial operation of the becaks at Borobodur. JE said first needed to take some measurements to plan becak system. Asked Heru & Cholis to take one becak there and measure the time it takes to drive from entry to drop-off, return trip, loading and alighting times. Heru should first talk to cooperative working there now to explain program and that we would include them in managing new system. Suggested trial for late February once had plan worked out, not right away.

Other Notes

Road Safety Group

- A new international organization is being started in Indonesia, called the "Global Road Safety Program". It is under the leadership of the former Minister of Transportation & Communications, who is highly regarded.

Monorail

- Monorail construction stopped in Jan 2005, then started again around May, but this only lasted 1-2 months. The Governor has given an ultimatum that if cannot get the financial closing from a bank by 31 Jan 2006, he will seek another consortium.

Yogyakarta Corruption Scandal

- Rahmah reported (5 January) that Provincial Secretary Bambang S.P. was fired by the Governor because of a scandal involving CDMA mobile phone service implementation. The Governor himself is also implicated in this scandal.

Motorcycles Increasing

- Motorcycle sales are booming in Indonesia following the large 80% gas price increase in October. Rahmah reported that the number of registered motorcycles in Jakarta has doubled in the past 2 years. Heru Sutomo reported that last November saw the first significant use of motorcycles for long-distance travel during Idul Fitri, four times the level of the previous year.

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Met 21Dec2005 at busway trial run for Corridor 2/3
Has contract for fare collection system on Corridor 2/3

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ADDITIONAL COMMENTS FOR BUSWAY SERVICE SURVEY

From Interview survey of 738 Jakarta BRT passengers on 12th – 14th February 2006
[complete survey results being compiled]

Corridor 1

- Immediately need additional fleet to avoid overcrowding
- Improvements on bus arrival management
- Comfort in the station: need AC or at least a fan
- Uncomfortable, often overcrowded
- Need different door to enter and get out of the station
- Uncomfortable station (some are very small)
- Ticket fare affordable for lower-middle class of citizens
- On a day light, station is hot. At night, overcrowded
- Station is not enough for all people during rush hours
- Ticketing officers are often moody
- Drivers with bad behaviour need further trainings
- Drink vending machine in the station
- Passengers need motorcycle instead of bicycle parking so they won't take motor-taxi anymore
- Rest room in the station
- Newspaper in the station
- The stairs are too long, so they need to walk around
- Need more fleet particularly during rush hours to cut waiting time
- It is very hot on a daylight
- Do not increase the fare, have pity on lower-middle class people wanting to ride on busway
- Bus departure time needs further arrangement to cut waiting time.
- Transferring fare for corridor 2 and 3 should be different from tariff for corridor 1
- No special seat for pregnant woman
- Station needs AC and benches
- Separator for the entrance and exit gate during rush hours
- Need more amenities in the station (rest room, benches, newspapers)
- Since the opening of corridor 2, there is lack of safety and security in corridor 1; suspicious person stalks women out from the station
- During rush hours, waiting time gets longer and passenger discipline as in the beginning of TransJakarta is non-existence
- Need an officer by the shelter door to arrange passengers entering and getting out of it
- It feels hot in the station because it is so narrow
- More facilities in the station such as benches
- Because it is an air-conditioned bus, passengers should not be allowed to bring things with odour such as fish, food, etc. into the bus
- Expand the bus route onto Bintaro, Pondok Indah, and Kebayoran
- More facilities, particularly for physically disabled people
- Lack of disciplin and untidy
- The increased tariff should not be more than Patas AC and the service should also increase
- Need benches for pregnant woman

- The AC is not cool
- Discount for students
- Separating the entrance and exit door

Corridor II:

- Bus fleet is very few for corridor 2 and 3
- Participant with high income asks to make busway more exclusive

Corridor III

- During rush hours in Kalideres station (corridor 3) at 6.30-08.30 passenger queue reaches 200-300m but only one ticket machine is open.
- Ticket machine shift in Kalideres station is not smooth. Passengers have to wait for 15 minutes before they are ready to serve.
- A ticket officer in Kalideres often has to pull out some money from her own pocket as there is a different number appearing from the ticket machine with the money in hand.
- There is a ticket manipulation in corridor 3. A staff let a person enter while the staff still held the ticket without putting it into the machine.
- Bus is overcrowded in several stations; passengers complain over it and its punctuality.
- Drivers often suddenly step on the gas and brake pedal which then makes the standing passenger uncomfortable. In addition, several road segments have holes on them.
- School students suggest special tariff for them
- Different entrance and exit door for passengers
- Feeder transport and bus fleet on corridor 3 are still very minimum.
- Minimum pedestrian facilities to the station; and also facilities for disabled people and pregnant women.

SURVEY OF PEDESTRIAN FACILITY FOR CORRIDOR II

Pulogadung Bus Station:

- The station is fairly accessible for physically disabled people, but lack of shady trees.
- Sidewalk width is not more than 1m.
- 200m of Jl. Perintis Kemerdekaan, from Pulogadung bus station westward, has no sidewalk or ditch cover. If there is, it has been occupied by street vendors.
- Sidewalk on a road turn heading to BRT entrance door is 1m wide, and often used by pedestrian going aboard or alighting from public transports stopping nearby the station.
- The distance between Pulogadung bus station and Bermis bus stop is too wide, and between them there is an alley named Jl Kayu Mas Raya. According to those driving on motor-taxis, it is better to add one more bus stop next to Jl Kayu Mas Raya because it is too far for them to walk to either Bermis bus stop or Pulogadung. On Jl Kayu Mas Raya, there is a road segment having no sidewalk and there are many traffic accidents between pedestrian and motorized vehicles there. However, on road segment with

sidewalk, the sidewalk has no curb so it is inaccessible for disabled people; moreover, there are garbage carts parked at the end of the sidewalk.

- Signs within the station are so few.
- Traffic around the station is so chaotic that it can risk the passengers.
- Indiscipline system to get passengers aboard or to alight them to the public transport
- There is no passenger bridge to the station.
- Pedestrian facility around Pulogadung bus station is so minimal.
- There is no sufficient traffic management around and within Pulogadung bus station.

In general, the situation around and within the station is inadequate to provide comfort and safety for passengers whether when they are going to ride on the busway, intercity bus, inner city bus, or other public transports.

Asmi Bus Stop

- Sidewalks around ASMI bus stop (southward) within 100m area are relatively good. However, there is no sidewalk nearby Gedung Arsip (Archive Building).
- As far as 400m from ASMI bus stop (northward) no sidewalk and space are provided for pedestrians.
- East of the bus stop, south part of the road has no sidewalk functioned for being occupied by some activities of an iron store
- The land around ASMI bus stop is often sloppy and inaccessible for disabled people.
- ASMI bus stop is shoulder to shoulder with residential houses and shops.
- Lands around the bus stop sidewalk are functioned as parking spaces.

Bermis Bus Stop

- The condition is good and accessible for disabled people.
- There are sidewalks around the bus stop but need improvements. There is sidewalk on east part of Bermis bus stop. On the north part, there is an alley with no sidewalk at all and it continues eastward.
- There is no sidewalk from the eastern part of Bermis bus stop, south segment, all along to Pulogadung.
- Sidewalks on Bermis western part, on both south and north segments, need to be improved.
- From the bus stop eastward, 100m from Bermis bus stop, there is Jl Kayu Putih Timur a.k.a Jl Pertokoan Pulomas. There are not many pedestrians around the street (10.38-10.56 a.m.). Along Jl Kayu Putihamun warga sekitar yang berjualan di mulut gang menyebut jalan itu sebagai jalan Pertokoan Pulomas. Tidak banyak pejalan kaki yang berjalan di sekitar jalan Kayu Putih Timur are shopping compound, intercity bus pool and middle-class residential housing compound. There is a closed gate on the entrance of the housing compound Jl Pulo Nangka.

Cempaka Timur Bus Stop

- In general, sidewalk and bus stop facilities are not adequate and accessible for pedestrians.
- There is no sidewalk 100m from Jl Jend. A. Yani – Perintis Kemerdekaan – Letjend. Suprpto intersection. Pedestrians walk on sloppy roads during the rain and dusty during dry season.
- There is new sidewalk nearby Cempaka Timur bus stop.

- No zebracross on Jl A. Yani – Perintis Kemerdekaan intersection.

Cempaka Tengah Bus Stop

- Bus stop condition is good, and sidewalk to the stop bridge is curbed
- Sidewalks around the bus stop have no curb.
- Sidewalk condition to Jl Cempaka Putih Barat XXVI is relatively good (because still elevated), but obstructed by plant pots of the Paskalis Church there.
- There is no sidewalk or other pedestrian facilities along Cempaka Putih Tengah shopping walk.
- Southwest part of the bus stop has fairly steep and narrow (90cm) stairs.

Galur Bus Stop

- There are no sidewalks along Jl Tembaga and Jl Galur.
- There are sidewalks along Jl Letjen. Suprpto, south side, but heavily obstructed.
- There is sidewalk along Jl Suprpto, eastern bus stop, but needs to be improved as it is still narrow.
- There are many malfunctioned sidewalks along 300m road from Rawa Selatan bus stop to after Galur bus stop. They have been occupied by street vendors, automobil workshop, wellding shop, or motor-taxis.
- Damaged sidewalk is from Jl Kampung Rawa Tengah to Jl Jembatan Galur Utara. There is also regular bus station on the street. Along the road to Jl Tanah Tinggi, the sidewalk is heavily damaged and obstructed by plant pots, trees, street vendors, parking lots, and shop displays. The same condition occurs on the sidewalk to Senen bus stop (next to the cinema).

Cempaka Putih Bus Stop

- The condition is not so good. The south bridge is not steep but the north bridge is inaccessible for disabled people.
- In front of Cempaka Putih Market, at the entrance of Jl Cempaka Putih Barat IV, there is round separator occupied by motor-taxis.
- There is a street vendor 2m from the entrance of pedestrian bridge on the north side of the bus stop.
- There is no sidewalk on the southeast part of Cempaka Putih bus stop. The available sidewalks are damaged, short and narrow (0.5m). This continues to Jl Cempaka Putih Barat I intersection.
- Damaged sidewalk is from Jl Cempaka Putih Raya to Rawa Selatan bus stop. Some are obstructed by pots, parked vehicles, street vendors, etc.
- Sidewalk around Cempaka Putih market is occupied by street vendors, parked motor-taxis and bajaj.
- By Jl Cempaka Putih Barat IV is taxi station (Kajen IV) with sidewalk to ease taxi passengers, but the place is unfunctioned anymore.
- Sidewalk in front of TASPEN building has been transformed into plant pots.
- Motor-taxi drivers complain over loss of passengers to BRT.
- Buses and motorcycles are driving on fast lane; a new violation since there is busway along Jl Letjend. Suprpto. Before this, there was no restriction for both vehicles to use fast lane. They violate because:
 ** Traffic congestion often occurs on Jl Jend. A. Yani intersection and on Jl. Letjend. Suprpto slow lane.

- * Several turns along Jl Letjend. Suprpto are closed.
- * Sidewalk in front of gas station is converted into car parking lot.
- * There is no pedestrian facility on Jl. Cempaka Putih Raya & Jl. Cempaka Putih Barat II.
- In front of Telkom building, there are lots of motorcycles driving on wrong direction because of those points above.

Pedongkelan Bus Stop

- The bus stop has been accessible for disabled people but not the sidewalks around the place.
- South part of Jl. Perintis Kemerdekaan, 150m eastward to ASMI bus stop, the sidewalk is narrowing down and even occupied by street vendors and street workshops.

Pulomas Bus Stop

- The condition of Pulomas bus stop and the sidewalks around have been good, shady and accessible for disabled people.
- The south part of the bus stop, from Cipinang west end to Jl Kayu Putih – Jl Bulevard Kelapa Gading intersection, has fairly good sidewalk.
- Both sides of Jl Kayu Putih have good sidewalks.
- Improvements are needed on Jl Bulevard sidewalk and northern Jl Perintis Kemerdekaan –east of the intersection. Meanwhile. The south side sidewalk has been heavily obstructed.
- Sidewalk is almost non-existent on the west side of Pulomas bus stop; however, there is sidewalk on the area nearby but also obstructed.
- 300m from Pulomas bus stop to ASMI bus stop, the condition is okay. On the road there are Haji Saunin Alley and Jl Pulo Nangka Barat II. There are not many pedestrians on both street. In 5 minutes (11.10 – 11.15 a.m.), there are only 5 people entering Jl. Pulo Nangka Barat II.
- From Bermis to Pulomas bus stop, there are few sidewalks but mostly there is green line up to Jl Kelapa Gading intersection.

Rawa Selatan Bus Stop

- Sidewalk is converted into car parking space. Up to 1/3 of the road is also used by Car Body and Workshop Association. The sidewalk is also used for welding workshop.
- Besides occupying the sidewalk, motor-taxi station on Pangkalan Asem t-junction is also obstructed bridge entrance to Rawa Selatam bus stop.
- The sidewalk has been curbed but the bridge is steep.
- There is no pedestrian sidewalk on Jl. Pangkalan Asem.
- 300m westward from the bus stop, the sidewalk on the south side of Jl Letjend. Suprpto is occupied by parked vehicles, street vendors, and motor-taxi station.

Islam Hospital Bus Stop

- Sidewalk on the south side of the road from Islam Hospital to Cempaka bus stop is relatively non-existence because it has been obstructed by trees. Access to the sidewalk is always obstructed in front of any entrance gate because it is always 50-60cm higher than the sidewalk. So there are lots of elevated parts on the sidewalk. Even, when YARSI opens its gate, the sidewalk is closed. It should no be a problem as long as it is still comfortable and accessible for all pedestrians.

- There is a bus stop in front of School of Industrial Management but it has no roof. There is no information on its further construction.
- Southwest part of the bus stop has steep, narrow (90cm) stairs.

Senen Bus Stop

- It is lack of comfort, with limited facility and access. It has no pedestrian bridge to the bus stop because located right in front of Senen traffic light.
- According to policemen around, Senen bus stop has no adequate light. There are lots of accidents as vehicles hit divider in the afternoon or at night.
- There is no zebra cross on the traffic light; thus, pedestrians have to face risk to access the bus stop by crossing the street.
- There is no zebra cross on Jl Kramat Raya – Senen – Kramat Bunder – Kwitang intersention for being covered with asphalt for busway.
- It is necessary to add another 1m for the divider that becomes the sidewalk of Senen bus stop.

SURVEY ON PEDESTRIAN FACILITY FOR CORRIDOR III

(16th – 20th January 2006)

Kalideres Bus Stop

Observation shows that ticketing entrance and exit doors have not functioned well. There is a plan to have a café or food stall between the arrival and departure station. It is a positive plan as it will provide more comfort for the passengers and contribute to economical productivity within the busway system. However, function alone is not enough if other human interests are neglected in the busway construction. For example, emphasizing the importance of access to disabled people who face difficulty in reaching the bus stop because there is no crossing bridge.

Here are some notes from the observation.

Kalideres positive points:

- The bus stop topography is not discriminative anymore because there has been curb lane to the bus stop.
- There is a plan to have a café within the bus stop
- The bus stop location is separated from other regular buses; thus, it seems more prioritized, neat and arranged. It is different from Blok M station, which is next to and mixed with regular buses.

- There are 3-4 small trees on the south side of the bus stop which are potential to be shady trees. Meanwhile, across the street is for taxi post but the sidewalk is quite shady.
- The bus stop size is sufficient for passengers from the bus station.

Kalideres negative points:

- There is no crossing bridge connecting the end of the terminal with busway bus stop in the middle. It is difficult for disabled people to reach the bus stop as it is almost enclosed with divider. The only access for them is the south side but it is also dangerous because it is the entrance and exit gate for the bus. Moreover, other passengers also face risk from heavy traffic of regular buses while crossing the street.
- The sidewalk next to the bus stop is inaccessible for disabled people as it has no curb lane and quite high.
- Ticketing entrance – exit gate has not functioned well.
- On the east, the sidewalk is only half meter wide. On the west, it is barely 2m. The sidewalks are not comfortable because shady trees are few (or non-existent) and packed with street vendors. The bus stop is indeed hot and uncomfortable.
- From the north bus stop door, there is no sidewalk eastward (to Harmoni). Traffic congestion is very potential as several regular buses often stop nearby the bus stop door. Therefore, the combination of those two things will create a danger for passengers entering the station from this side.
- Sidewalk exists after several hundreds meter eastward from the station. Even that is not adequate because obstructed by electricity poles and grassy.
- On the same direction, there are three alleys without enough shady trees. The only alley with shady trees is Jl Madrasah.
- 300 m westward, up to crossing bridge, there is no sidewalk at all. There is only road side which is very dangerous and cannot protect pedestrians from big vehicle traffic on the road.
- The stairs of the crossing bridge are bit shaky that can be dangerous for the pedestrians.
- Two crossing bridges of Mookervart channel (Kalideres) of the river along Jl Semanan Raya are obstructed by piles of garbage.
- There is no sidewalk from Jl Semanan Raya to the bridge
- Around Ipli market on Jl Semanan Raya is often congested, while the sidewalk is for parked cars.

Additional information:

- Vehicle flow from both sides is smooth and seldom is there traffic congestion.
- Traffic Police are always on patrol at 6 a.m., 2 p.m. and 8 p.m. westward of the bus stop.

2. Pesakih Bus Stop

- Sidewalk around the bus stop is inaccessible for disabled people.
- There is no sidewalk on the north side of the bus stop eastward.
- Sidewalks on the west and east sides of Jl Tampak Siring need improvements because they are so narrow. The same thing occurs western part of the bus stop.

- The sidewalk on the south side of the bus stop up to the alley toward Pesakih bridge needs to be widened and improved. After passing Pesakih bridge eastward, the sidewalk has been good.
- There are two rafts to cross Mookervaart (Kalideres) channel from Kampung Semanan to Jl Daan Mogot Km.16 (there are traffic police office and Daan Mogot Theater across). One person should pay Rp 500 for one cross. This is potential to develop a short trip water transport as a feeder.
- Sidewalk along the southside of the street is actually a cover to the water ditch under it, and lots of it have been damaged or have holes on it.
- 50m from the bus stop, south side of the street, the sidewalk is not flat and obstructed by traffic lights and sign poles.
- 100m eastward from the bus stop, south side of the street, there is a bridge to cross the river which is usefull for manufacture vehicles there and connecting the road to Kampung Semanan. Nonetheless, it cannot be crossed with cars.
- Mookervaart channel (Kalideres) is often flooded Kampung Semanan.
- 300m eastward, the sidewalk is in good condition although the the end is not curbed. It has shady trees on it. Nevertheless, motorcycles are repeatedly up to the sidewalk because they do not want to turn around when they want to go to the north lane.

3. Halte Sumur Bor

- The sidewalk around is inaccessible for disabled people, there is no curb lane, and along the street northward, the sidewalk has minimum facility.
- There is no sidewalk on the northside street, from east to west, around the bus stop.
- There is no sidewalk on southside of the street, eastside of the bus stop.
- It needs improvements for sidewalk on the street southside, west of the bus stop.
- 350m to Sumur Bor bus stop, there is no other bus stop, sidewalk or other pedestrian facilities.
- The bus station condition is still good; however, there are lots of garbage piles along the river nearby.
- Close to the bus stop, there is a bridge for PT Hisotex vehicles that also connects the alley with the village.
- 100m from the bridge, there is a river cross from Kampung Duri Semanan.
- Public transport passengers often alight on road turn or separator in front of JAMSOSTEK building and shops there.
- 500m eastward, there is river crossing bridge to Kampung Duri Kosambi, accesible only with motorcycles and on foot.

4. Halte Rawa Buaya

- There is no crossing bridge to the bus stop which means creating risks for passengers and disabled people. Instead of bridge, there is zebra cross to the entrance-exit door for the passengers. This is dangerous because passengers often cross as they want without using the zebra cross; whereas, traffic is quite dense there.
- The sidewalks around are inaccessible for disabled people.
- There are two bridges for PT BASF vehicles on the west side of the bus stop, but difficult to access by residents around because the end of the residential road is closed.
- Sidewalk condition from PT BASF to Rawa Buaya bus stop:
 - o Full of holes and bushes.
 - o Shady trees are rare.

- Pedestrians prefers walking on 1m-ditch cover/lid, functioned as sidewalk, although some have been opened or become holes.
- 200m from BASF to the bus stop, there are two rafts as access to Rawa Buaya village. One of the rafts is near to the bus stop.
- According to a woman working on the raft, lots of Rawa Buaya residents are working in Senen, Slipi, Citraland and Blok M areas. Therefore, the bus stop nearby the crossing bridge can increase her income.
- There is a bus stop 100m from Rawa Buaya bus stop but the roof have holes on it.
- Sidewalks around Rawa Buaya bus stop are fairly better but probably the shade is not really covering pedestrians from rain.
- There are 2 bridges over Mookervaart channel connecting Jl Ringroad (Jl Lingkar Luar Barat and Jl Lingkar Luar Timur).
- Jl Ringroad turn is a station for mikrolet and KWK public transport.
- At 5 in the afternoon, both ends of the bridge are always congested. The bridge only has 1m-wide sidewalk on one side of the road.
- On Jl. Lingkar Luar Timur, there is an alley (Jl. KH Wahab I) leading to residential area.
- The end of Mookervaart bridge up to Jl Daan Mogot is packed with motor-taxis; thus, the sidewalk on Jl. Lingkar Luar Barat is also full of street vendors. On the other hand, lots of pedestrians use the sidewalk to wait for public transport and to cross the street to the intersection.
- 200m westward from Jl. Lingkar Luar Barat, there is a river bridge accessible only for pedestrians to Rawa Buaya village.
- In general, sidewalk from Rawa Buaya to Jembatan Baru bus stop is damaged, and according to the residents there, the sidewalk along Rawa Buaya has high crime rate.
- The path to ticket vendor in the bus stop is only 3m wide. This is dangerous for passengers because it has no fence, no separator from the road used by TransJakarta. According to a DLLAJR officer observing there, the fence was going to be erected soon.

5. Jembatan Baru Bus Stop

- Most roads around Jembatan Baru bus stop have no sidewalk, while the available one is inaccessible for disabled people. On south-side road, sidewalk facility is very minimal.
- Sidewalk under the bus stop is inadequate as being covered with mud. During rainy season, the bus stop floor is dirty from the mud.
- Ticketing door has functioned but most passengers cannot use it well. Doorman always teaches passengers how to enter the station.
- During this survey, several passengers asked route information to the crews there because there was no route map put there.
- Nearby the bus stop, the busway is twice the size. It is for TransJakarta heading to Dispenda bus stop, which then congests the mix traffic during particular hours. Bus crews did not know exactly the reason for it.
- There is no written information on route map within the bus station.
- The sidewalk right before the bus stop is almost blocked by motor-taxi and it obstruct pedestrians' comfort.
- On Jl. Rawa Buaya, the river bridge has sidewalks on both sides. However, 200m sidewalk along Jl Rawa Buaya cannot be used because being occupied by parked cars along the shops and street vendors.

- The sidewalk at the end of Jl Rawa Buaya is occupied with street vendors. Sidewalk along Jl Daan Mogot up to Jl Rawa Buaya is damaged and there are piles of garbage nearby. Traffic flow on Jl Rawa Buaya is dense at 5 p.m.

Note:

The bus stop is overcrowded with passengers to Harmoni at 10.20 to 11 a.m. During that period, there are 3 TransJakarta buses arriving but each can only carry 3-5 passengers. At 11.01 to 11.06 a.m., there are 4 TransJakarta buses arriving but only 6-8 people can be aboard. At 10.45 a.m., the ticket box is closed for a while.

6. *Jembatan Gantung Bus Stop*

- There is no sidewalk around this bus stop. Poor sidewalk exists on Pintu Air and east of ABC door.
- The bus stop is good because it has been accessible for the disabled people (crossing bridge has curbed lane).
- The sidewalk under the bus stop is used as a station for motor-taxis and it obstructs the access to the bridge. There are about 14 motorcycles stationed there.
- There is an alley on the west side of Jembatan Gantung that connects it with Kompleks Basmol.
- There are few traffic accidents here.
- There is no sidewalk along Jl. Pertamina Ringkin, and the end of the road is used for motor-taxi station.

Note:

- During the survey, on 17th January 2006 at 9 a.m., there was a KOPAJA bus entering busway to Taman Kota. That morning, there was no officer guarding the separator.
- There were also lots of motorcycles or bicycles running on the bus stop bridge. It disturbed pedestrians from crossing the street or about to use BRT. The bicyclists are bicycle-taxi drivers, and there are also residents with their own motorcycles and children playing bicycles. They use the bridge because crossing access for motorcycle and bicycle to the north is closed with high divider because of the busway. Now to cross they have to go westward about 2-3km.
- According to PORGANA (Gantung Motor-Taxi Driver Association) and the neighboring residents, motorcyclists do not want to go around for more than 2.5km. The BRT separator has closed 3 turns on the way between Dispenda and Jembatan Baru bus stops.
- Closing those turns has brought fuel and time loss for motorcyclists and motor-taxi drivers.
- Residents from 4 districts (Rawa Buaya, Kedaung Kali Angke, Kapuk, and Kembangan) has requested West Jakarta Transportation Agency to make a turn for motorcycles around Jembatan Gantung but received no response.
- According to a resident there, several mass media (Warta Grogol, Skala Indonesia, Warta Cengkareng & Poskota newspapers) have covered this problem.

7. *Dispenda Bus Stop*

- No sidewalk on the north side of Dispenda bus stop, while the south-side sidewalks need to be improved.
- The sidewalks are inaccessible for disabled people.
- There is a bus stop in front of a glass factory, 200m from Dispenda bus stop.

- There is a bus stop in front of shopping and store compounds.
- The roadside of Jl Daan Mogot leading to Jl Bangun Nusa and Jl Jatiraya is dangerous for pedestrians because it has steep slide. Jl Jatiraya and Jl Bangun Nusa are lower than Jl Daan Mogot; whereas, there is no sidewalk there.
- Jl. Jatiraya is an access to SMAN 95.
- There are lots of traffic accidents occurred accros PT ABC factory, and most of the victims are pedestrians.

Note:

From Dispenda bus stop westward, there is Pelita alley heading to SD 01 Pagi Cengkareng Timur, SMP, SMU and SMK Harapan Jaya (Yayasan Ittihad). There are lots of traffic accidents involving students crossing there as 80% of the students are from across the street. Once happened that in a week there were 4 accidents. Averagely, there is one accident every month. The information was from Roy, a janitor in SD 01 Pagi, Cengkareng Timur, on 17th January 2006. The neighboring expects crossing bridge, zebra cross, or crossing light for students.

8. Taman Kota Bus Stop

- In general, sidewalk facility around Taman Kota is still bad. There is no sidewalk on the north side: eastward to Depag compound intersection and westward for more than 2 alleys. Sidewalk is also non-existent on the south side westward. There is poor sidewalk on the south side of the road, east side of the bus stop.
- 300m western Taman Kota bus stop, there is Naval Army residential compound, but often flooded.
- Almost no sidewalk along the street.
- Sidewalk in front of Metro Jaya Police is quite full of driving license jockeys. It is uncomfortable for pedestrians.
- Nearby the bus stop, there is Jl. Tawang Mangu Kalimati, a 4m wide alley.
- There is no sidewalk on the south side of Jl Daan Mogot KM 10.
- Traffic flow around Taman Kota bus stop is a bit congested.
- 10m from the bus stop, there are 2 bus stops on the north side of Jl. Daan Mogot, and one on its south side.
- There is a stair on the south side of the bus stop, which creates difficulty for disabled people.
- 32 motor-taxis are stationed on Jl Raya Basmol.

500m westward from Taman Kota bus stop:

- Until 150m, there is no sidewalk, only 3 bus stops.
- There are 1m-wide sidewalks on both sides of Jl Raya Basmol.

500m eastward from Taman Kota bus stop:

- There is fairly good sidewalk 300m from the bus stop but without shady trees.

9. Indosiar Bus Stop

- The north side of the bus stop is accessible for disabled people because it employs stairs with no curb lane.
- No sidewalk on the north side, eastward up to Jl Sosial.
- There is sidewalk from Jl Sosial eastward but heavily obstructed.

- The sidewalk from the bus stop westward, needs to be improved. It has been quite accessible for disabled people although several parts have holes and damages.
- There is a sidewalk on one side of Jl Damai but occupied by street vendors while motorized vehicle traffic volume is quite high there.
- There is no sidewalk on both sides of Jl. Daan Mogot, westward, but lined with shady trees.
- There is no sidewalk on both sides of Jl. Daan Mogot, eastward, but there are curb lanes from office gates used as refugee islands by pedestrians from traffic.
- There is one bus stop each on north and south side, nearby Indosiar bus stop.

Note:

During the survey, there was overcrowding of passengers to Harmoni at 2.55 to 3.39 p.m. During the period, there were 4 TransJakarta buses arriving and each could only carry 4-5 passengers. There were about 30 disappointed potential passengers and they sent protest to the officers there. At 3.43 p.m., a relatively empty TransJakarta bus arrived and was able to carry all passengers.

10. Jelambar Bus Stop

- The crossing bridges on the south and north side have been using curb lanes although still too steep for disabled people.
- On the west part of Jelambar bus stop, on the north side of the road up to Jl Hemat, there is no sidewalk. The south side has sidewalk but heavily obstructed.
- On the east part of Jelambar bus stop, on the north side up to the flyover, the sidewalk is heavily obstructed. Until the east part of Jl Satria, there is no sidewalk. Meanwhile, on the south side up to the flyover, the sidewalk needs improvements. This condition continues westward up to Tarumanegara University.
- There is sidewalk around Trisakti and Jl DR. Susilo, but needs to be improved.
- Ticketing door on this bus stop has not functioned well.
- 500m westward of Jelambar bus stop, on both sides of Jl Daan Mogot, the sidewalk has been damaged, and many are used for street workshop areas.
- A zebracross is covered for BRT lanes; whereas, it lies in front of TK, SD, SMP, SMU Bunda Hati Kudus schools.
- Traffic flow within 500m radii of Jelambar bus stop is smooth. Traffic is congested on particular hours and caused by stationed buses.
- 100m from Jelambar bus stop are shops, gas stations and offices.
- There is sidewalk 100m from the bus stop up to Ciputra Mall. Shady trees are only planted in front of the mall.
- There is crossing bridge and zebracross for pedestrians on Jl. S.Parman Tanjung Duren, but the sidewalk is packed with street vendors.

Note:

- Bus arrival frequency from Harmoni: at 06.50, 07.00, 07.18
- Travel time from Jelambar to Kalideres bus stop: 07.18-07.40. The written sign and announcement of the TransJakarta arrival on 16th January 2006 were not the same.

PALEMBANG , INDONESIA – SCOPING AND REPLICABILITY REPORT

Report by Instran

Introduction

Palembang lies between 2°52' to 3°5' South Altitude and 104°37' to 104°52' East Longitude, and 8m height from sea level. Since 2000, Palembang consists of 14 *kecamatan* and 103 *kelurahan*, covering an area of 353.80km².

Based on data from a Sustainable Voter Registration and Citizen Counting Activity (P4B) in 2003, the number of Palembang inhabitant at the end of 2004 was around 1,312,551 people: 665,866 males and 646,685 females, with people density reached 3,710 people/km² and citizen growth from 2003-2004 reached 1.17. The growth number is still natural; caused by mortality and immortality rate, few are affected by migration factor.

1. Transportation

Mode of transportation in Palembang is quite varied covering the land, sea, and sky areas. The land transportation is based on road and rail. On the road, there are motorized and non-motorized vehicles such as bicycles and becak. The number of becak in Palembang is rather significant.

The train serves long distance travel with final destination in Bandar Lampung City and Lubuk Linggau. For the sea transport, there are those heading for Bangka, Batam Island, areas along Musi River and areas within Palembang itself. Meanwhile, the airplane connects the city with Jakarta, Batam, Bangka, Medan and Jambi.

Official data showed that in 2004, road length in Palembang reached 894,439 km, which are: (1) country road 64,700 km, (2) province road 85,980 km, and (3) inner city road 743,759 km. From them, 95.69% is covered with asphalt, 0.47% with gravel, 2.52% with soil, and the rest 1.32% with other materials. Based on its condition, 85.80% is in good condition, 10.83% fair, and 3.37% heavily damaged.

Just like in other Indonesian big cities, the mix traffic in Palembang is a real chaos: road users' low discipline has often caused accidents. Indeed, there is always an unease feeling driving one's own vehicle because there are so many violences upon traffic regulations. Traffic light is ignored as long as people are extra careful; although it still does not work.

Main roads in Palembang are adequately wide, such as Jl. Sudirman, Veteran, Angkatan 45, Kapten Rivai, Perintis Kemerdekaan, Demang Lebar Daun (DLD), Basuki Rachmad, R. Sukanto and Patal Pusri. Jalan Sudirman that is connected with Jl. Kolonel H. Berlian forming a 12km road, for example, is a two way street with three lanes in each direction. Those two roads are the thoroughfares connecting southern and northern Palembang. It is very likely that bus can pass these roads.

2. Public Transport

Palembang has quite various public transport, particularly for the motorized vehicle type. They are DAMRI bus, medium bus, small bus, and public passenger car. Based on the data from Palembang Transportation Agency in 2004, the number of those public transports were: 588 medium buses, 515 small buses, and 2,132 public passenger cars (Carry colt, paratransit, and so forth).

There are several problems occurred from public transport condition in Palembang.

First, passenger number is far too small in comparison with the fleet number; thus, public transport crews will complain over the imbalance between high operation cost, especially fuel price, and small revenue.

Second, public transport route is overlapping, which then causes harsh competition and chaotic traffic because all public transports in the same route will fight over passengers. For example bus line 5 (Jl. Sudirman – Haji Berlian route) passing Jl. Sudirman – Sumatra Express will be squeezed by buses heading for Perumnas, line 12, Bukit Besar, Skip, Kertopati and Plaju. Furthermore, in addition to the official public transport, there are these illegal ones joining the crowd. These illegal public transports have no route permit and are usually owned by government officials. Often it happens also that there is a public transport cutting the route and not finishing the whole loop because pursuing more potential passengers. This creates horizontal conflicts if known by other drivers

Third, there is this illegal payment along the route done by some officers (from Transportation Agency, police, army) or by thugs. In a day, a medium bus can pay Rp 40,000 for them. Transportation in Palembang is known to be ruled by thugs; thus, drivers have to be willing to illegally pay some money for them. On the other hand, daily deposit for a colt, for instance, can reach Rp 100,000 per day and Rp 70,000 for a paratransit. After the fuel price hike, a driver can only bring home averagely Rp 25,000 with working more than 12 hours a day.

Fourth, the physical conditions of the vehicles are mostly very bad. Because too old, they generate lots of pollution, uncomfortable for the passengers sitting on damaged or dirty seats, and non-air conditioned. Furthermore, for having no fixed time schedule, they often stay long at a place waiting for passengers until eventually congesting the road or disturbing other road users.

Besides, public transport policy in Palembang is also blurry as represented in the case of a bus serving students of Sriwijaya University (UNSRI). In 1994, UNSRI campus was removed from Bukit Besar (downtown Palembang) to Indralaya, 35km southward from Palembang without supplying special public transport either from government or from the university. Then, the transportation service was provided by PO Sapta Abadi, PO Adi Jaya, and PO Jaya Bersama. Those buses run Km 12 – Indralaya, Perumnas – Indralaya, and Pusri – Indralaya. Because passenger volume in those areas were small, the buses then moved their departure point to Cinde, a shopping complex near student residents. The problem appeared when Cinde was not only popular for students but also for public passengers, including the university faculties. After quite some time without any regulation, in 2004 there was a Governor decree No. 561/KPTS/Perhubungan/2004 on student bus route. The route was UNSRI Bukit Besar – Jl. Sriwijaya Negara – Jl. DLD – Jl. Parameswara – Jl. Alamsyah Ratu Prawiranegara – Jl. Musi II – Kampus UNSRI Indralaya and then back to the first point.

There were three reasons for the Decree, which were: 1). It created congestion in Cinde, 2). It carried public passengers, which meant taking over them from public transport, 3). Ampera Bridge was getting older and its burden needed to be enlightened.

The Governor Decree enraged students and drivers. They held a demonstration to Transportation Agency and Governor Office requesting them to withdraw the decree. Buses departed from Cinde got penalty but still students were waiting for the bus in the area. It is apparent that the decision is not based on consumer's need but on the decision makers.

Vertical (between people and decision makers) and horizontal (among public transport crews) angkutan umum) conflicts often occur in Palembang. There are two causes for it. First, objectively, city policy is unclear and do not bring advantages to its citizens. Second, Palembang citizens are hard headed and emotional, and it is manifested in their traffic behaviour.

3. Mass Transport

Up to this moment, Palembang has no mass public transport, except medium bus and minibus. However, since 2004, the administration has made a print on the left side of Jalan Sudirman, stating "Bus Lane", and wished to develop busway but the House did not agree on Rp 300 million for its study fund. Thus, Ir. Hardayani, Palembang Bappeda Secretary in a personal interview on 2nd February expressed his wish to know the necessary steps to construct busway, and how much was needed to study busway potential here. If it is not too big, the executive body will work for it without needed any approval from the House.

4. NMT

Becak is an NMT mode with significant number in Palembang. There is no official data for it but several sources mentioned there were 12,000 becak in the city.

In a high season, a becak driver can have Rp 30,000 per day or Rp 20,000 on regular days.

New becak will cost over Rp 1 million while the used one is about Rp 800,000 – Rp 900,000.

According to becak drivers, it was difficult to eradicate the vehicle from the city because it is like a life saviour for them. They have no other works to explore. Trading is ruled by Chinese, Medan and Padang people, while meat ball and noodle sellers are from Java. The only job opened for uneducated Palembang and South Sumatranese is driving becak. Thus, it is difficult to banish the vehicle from the road as the plan will face hard fight from becak drivers.

4.2. Bicycle

Bicycles are rarely found transportation mode in Palembang although the surface of the city is flat. Besides the hot weather, Palembang people also think it is undignified to ride a bike. They associate bicycles with poverty; it is fit for mobile sellers and few students.

4.3. Pedestrian

Palembang has minimum and bad pedestrian facility. Many roads have no sidewalk unless the sidewalk is bad and inaccessible for all people. New sidewalks are occupied by street vendors. The only comfortable pedestrian area is around Benteng Kuno Becak (BKB) near Musi River. The municipal government plans to connect this area with Pasar 16 that will be built as the largest shopping compound in South Sumatra. The area from BKB to Pasar 16 stretches for almost three kilometers.

5. Conclusion

Palembang is one of big cities in Sumatra Island with chaotic transportation system. The road users' discipline is low and there is no tight control from law enforcer. Transportation policies are also unclear which often create vertical and horizontal conflicts. Thugs are ruling public transports so that many expenses are allocated for them.

6. Recommendation

Based on some observations, it is likely that the government will support the plan to develop bus-based mass transportation and pedestrian facility improvements. Seen from the priority, Palembang is after Batam and Makasar considering that the potential area for pedestrian is very narrow (less than 3km) and limited number of potential roads for busway. Nonetheless, there are lots of social and cultural obstructions.

MAKASSAR, INDONESIA – SCOPING AND REPLICABILITY REPORT
Report by Intran

Introduction

Makassar is the capital of South Sulawesi province. Previously during the New Order, it was named Kotamadya Ujung Pandang. It was granted its original name, Makassar, in 1998 as it was also more preferable for the citizens because the name represented their culture as brave people.

Geographically, Makassar Metropolis City lies on the west coast of South Sulawesi on 119°18'27.97" - 119°32'31.03" East Longitude and 5°00'30.18" - 5°14'6.49" South Altitude. The area is located between 0-25 meters from the sea level and within the temperature range of 20°C to 32°C. Covering an area of 175.77 square km, Makassar City is in between two rivers: Tallo River running northward and Jeneberang River flowing southward. The city boundaries are: the Makassar Strait on the west, Kabupaten Pangkajene Kepulauan on the north, Kabupaten Maros on the east, and Kabupaten Gowa on the south.

In 2004, Makassar was inhabited by 1,247,641 people: 645,885 men and 601,756 women. Its people annual growth is 1.64% and the density is 6,600 people/km. The citizens consist of many ethnicities living together peacefully. The city is also a transit for tourists intending to go to Tana Toraja although it also has its own potentials.

Moreover, Makassar is known as the third biggest city after Jakarta and Surabaya. It is an entrance to eastern part of Indonesia. Indeed, there are lots of national leaders originating from this area; among them are B.J. Habibie (a former short-termed President) and Jusuf Kalla (the recent Vice President).

1. Transportation

Transportation in Makassar is dominated by private vehicles. Like in any other big cities, the motorized vehicle growth, especially motorcycles, these past years are very high. In 2002, the number of motorcycles was 203,601 units which increased by 55.62% in 2003 into 316,864 units, and in 2004, it became 449,947 units or a 42% increase. It means that in two years, the number has reached a 122% increase. It is huge in comparison with the growth in other cities which is averagely 7 – 15%.

Table 1
The Number of Vehicles (Public and Private) in Makassar

No	Type	Year		
		2002 (Unit)	2003 (Unit)	2004 (Unit)
1	Motorcycle	203,601	316,864	449,947
2	Passenger car	19,578	20,281	21,009
3	Goods car	19,105	20,212	21,383
4	Big bus	674	761	859
5	Medium bus	16,426	16,648	16,873
6	Small bus	12,536	12,704	12,874
		306	346	391
	Special vehicle	103	164	261
	Public car	13,136	13,286	13,438
	Three-wheeled vehicle	16,000	16,000	16,000
	TOTAL	301,456	417,266	553,035

Source: Makassar Transportation Agency, 2005

Based on some interviews, the high growth number of motorcycle is encouraged by the unreliability of public transport. Motorcycles are more efficient and effective as modes of transportation. In addition, residential areas are also built far from main roads; thus, the access to their houses is difficult. The recent fuel price hike is considered as a factor that further encourages the growth of motorcycle.

Irwan Intjie (Deputy of Commission D in Makassar House of Representatives) said that the House had suggested the reduction of private car and motorcycle dominance by implementing emission test and limiting the vehicle age. Although still a passage in Makassar Transportation Strategic Plan, those two policies are expected to banish un-roadworthy vehicles from the streets such as in Singapore.

Besides the motorization dominance, it is observable that there lots of becak in Makassar. An official data mentions that for three years (2002-2004), the number of becak is stagnant on 16,000 units. However, apparently there are more becak on the road because according to becak drivers there are new becak produced and sold for Rp. 1,500,000. There is this difference between the official data and the actual condition because new becak operated is not registered.

Besides its abundant number, becak is widespread all around the city, from the arteries to small alleys. This is often complained by the residents and decision makers. The decision makers have an idea to restrict becak on the arteries and direct them to collective, local roads. It is also expected to establish becak as feeder transports instead of as the main modes.

The chaos in mix traffic results in high accident number in Makassar. The number can be observed from insurance claims in PT. Asuransi Jasa Raharja below.

Table 2
Number of Traffic Casualties Requesting for Insurance Claim

No	Condition	Year		
		2002	2003	2004
1	Killed	865	780	841
2	Injured	1,233	1,165	1,401
3	Permanent deformity	74	60	48

Source: Makassar Transportation Agency, 2005

The actual number is higher because the number above shows how many accidents are being processed by the police; whereas, there are more accidents settled among those involved without reporting it to the police.

Besides the high number of accidents, there is also the congestion problem. Several thoroughfares in Makassar, such as Jalan Urip Sumoharjo, Sudirman and Bawakaraeng, are always congested particularly during the beginning and the end of school hours. It is predicted that the situation will get worse as new malls and shops are built without a traffic effect analysis –according to H. Barimin Tahir (Land Transportation Sub Agency head in Makassar Transportation Agency. To build a building permit, the developer should have a Building Construction Permit issued by the Landscape Agency after being recommended by the Transportation Agency. One of the examples is Cendrawasih Square built without any traffic impact analysis, but it will be the Transportation Agency that takes the blame if there is traffic congestion around the area.

2. Public Transport

Public transport in Makassar is dominated by Carry colt type with 14 people capacity. It is called Pete-pete in Makassar. Its number is actually very small; the official record is 4,550 units (a 0.85% share). Added with the illegal ones, the number reaches around 6,000 units (1.08% from all vehicles). However, pete-pete generates an image if occupying the whole city because it is likely to go thorough all types of road, stop anywhere the passenger willing it and even wait for the passengers in the middle of the road. Private vehicle owners always

said that pete-pete is the source of traffic congestion. On the contrary, Rahim Bustam SH head of Makassar Organda stated that private cars are the trouble makers because their number is exceeding public transport.

According to Rahim Bustam, people could not blame only pete-pete for stopping at any place but also the culture of Makassar people who wanted to get into and out of the vehicle anywhere they wanted it. For example, when there was a new mall constructed, passengers stop pete-pete in front of the mall although there is a station near there. The blame for any congestion is on pete-pete drivers.

Besides pete-pete, there is DAMRI bus but its condition is too old (highly polluted) and the number is very limited. DAMRI bus often serves routes to universities (Indonesian Moslem University and Hasanuddin University).

Besides the fixed-route public transport, there are also non-route ones like taxi, tourist bus, motor-taxi, and becak. Table 3 shows the number of each vehicle.

No	Vehicle type	Year		
		2002	2003	2004
1	Taxi with agro meter	1,454	1,614	1,200
2	Taxi without agro meter	242	263	250
3	Rented vehicle	--	--	--
4	Tourist bus	47	53	55
5	Three-wheeled vehicle (becak)	16,000	16,000	16,000
6	Motor-taxi	1,342	1,460	3120
7	Others	-	-	-
	TOTAL	19,085	19,390	20,625

The dominance of small vehicle and becak is the largest public transport problem in Makassar. The problem gets worse with the existence of motor-taxi. The data above shows that the growth of motor-taxi these past three years reaches 132%. Besides creating a regulation conflict, it also creates a horizontal conflict with pete-pete. The existence of motor-taxi around Hasanudding University and residential areas, according to Ahmad Zubair, head of Makassar Driver Association, had reduced the ridership of city public transport up to 50%. Pete-pete load factor now is only three people. This condition causes both inefficient public transport operation and traffic congestion.

3. Mass Transport

Member of the House, officers from Transportation and Public Works Agency, Organda head and NGO activists stated that Makassar nedd a mass transport to untangle the present chaotic transportation system. With a comfortable and punctual mass transport, it is expected that private vehicle owners will shift into this mode and eventually reduce traffic congestion. In addition, with 1.3 inhabitants, the existing number of pete-pete in Makassar is too much.

Ideally, the city only needs around 2,800 units; therefore, a mass transport can be a solution to reduce those numbers.

The sources of information above also agreed to reduce pete-pete number with a roadworthiness test (emission and service tests). This will limit any resistance from the people. Thus, Organda head suggested socializing this idea to pete-pete owners for 2-3 years. With enough knowledge on sustainable transport, they will not strongly object to the policy; instead, it will be like a natural selection. Strong resistance will appear if it is suddenly implemented so they think that the government is not on small people side.

The same opinion was also expressed by M. Hasbi Amdullah, director of Makassar-Indonesian Legal Aid Foundation (YLBHI). He said that one way to minimize the resistance was by involving every stakeholder from the community since the very beginning. Previously, pete-pete drivers had strongly objected the eradication of red pete-pete because the policy was implemented without any socialization and they were confused for suddenly losing their jobs without any alternative for new jobs.

The same incident happened when four school buses are operated. Pete-pete drivers refused them because it affected their income and ridership. Apparently there was no common understanding upon the importance of student transport service.

Mass transport developed in Makassar is the bus-based one. The requirement to develop this mass transport is in line with South Sulawesi Province government to build MAMINASATA (Makassar, Maros, Sungguminasa and Takalar) area such as JABODETABEK (Jakarta, Bogor, Depok, Tangerang and Bekasi) in Jakarta. The consequence for such development is an adequate infrastructure and transportation. In infrastructure, the municipal government has been supported by the central government to construct an outer ring road as an alternative road so that people will not only go through the only road in the city.

Another mass transport to connect every area in Sulawesi is the rail-based mass transport known as Trans Sulawesi. According to Irwan Intjie, this mode of transportation has been put in 2006-2020 Makassar Regional Planning which is being finalized. The rail-based transport was based on an agreement among all Sulawesi governors in 1999. Worthiness study had been accomplished but the plan was ignored after Vice President Jusuf Kalla stated that it was not the right time to develop Trans Sulawesi. His statement is probably dealing with toll construction business owned by his family.

4. NMT Development

4.1. Becak

Makassar is one of big cities in Indonesia that still has becak. Although official data records 16,000 becak in the city, it is likely that the number is larger as becak production is still running.

The problem is there is no district regulation for becak operation so that it is operated on all types of road. Crossing at any place, driving in a wrong direction and no NMT lane often cause traffic accident between becak and motorized vehicles.

According to Irwan Intjie, to reduce becak growth in Makassar, it will be restricted for becak to be operated on artery roads. It will be operated on collective roads or local roads.

Makassar becak is very small. There is barely any space for two people. The seat wide is only 75-80 cm and the height of the becak is 1.5m so drivers can see clearer. The old type becak does not use spring but the new one uses spring like BISMA does. The old type costs about Rp. 750,000-900,000 while the new one Rp 1,500,000-1,600,000. Becak drivers own the becak with credit system. They have to pay from Rp. 4000 to Rp. 15,000 per day based on the size of the becak and its credit period.

As in Jogja, there is no fixed tariff for becak in Makassar. It creates difficulty for seasoned passengers or Makassar visitors. Hotel staffs always remind a to-be passenger to bargain for its tariff. Once it happened that a becak driver asked for Rp 150,000 from the passenger when there was no clear bargain.

The majority of Makassar becak drivers are from Kabupaten Jeneponto on the south end of Sulawesi. It is a slump region and the residents are seasoned job seekers in Makassar. They will return to their city during the harvest period.

Makassar Organda head, Rahim Bustam, was interested to produce wide and good BISMA becak as a transportation mode in Losari Beach tourist area. He would make the production budget.

4.2. Bicycle

Bicycles can still be seen quite a lot on several roads in Makassar. Even, the number is quite significant along Losari Beach in the morning and evening. They are heading northward (city) in the morning, and in the evening they go southward through Somba Opu Chinese area to Kelurahan Maccini Sombala. The number is increasing since the Lippo Group built a bridge over Losari Gulf connecting Kelurahan Maccini Sombala and Mattoangin in 2000.

According to Makassar Deputy Mayor in his meeting with Pustrat and ITDP, there was a plan to revitalize and develop the area along Losari Beach into a pedestrian area with bicycle and becak lane as long as 1.2km. Recently, the construction of the area with financial support from the capital is stopped.

Several sources mentioned that until 1970s, there were bicycle and becak lane along Jl. A. Yani, Jl. Sam Ratulangi and Jl. Veteran. If there is a desire to develop bicycle lanes, it is better to redeveloped again those lanes; moreover, Jl A. Yani now is a one way street with proficient width for NMT lane.

4.3. Pedestrian Area

According to Ir. Ansar (Road and Bridge Office in Public Works Agency), Makassar had adequate pedestrian facilities. This year, Rp. 2.5 billions has been provided to construct new sidewalks or improve the old ones. The new sidewalks will be along Jl. Pattarani; on both sides, each is 2km long; Losari Beach 1.2km; Sudirman 2km; and Bawakaraeng 2km. It will be accessible for those blind people and with wheel chair. The maximum height of the sidewalk is, therefore, only 10cm.

Several good sidewalks are in front of governor and mayor's official houses, in front of Bank Indonesia building and in front of Rotterdam Fort. The sidewalk in front of the Bank on Jalan Sudirman was constructed five months ago by the Bank itself. It is only 100m and six meter wide but well designed and accessible for children and deformed people as the building is near to Sudirman Elementary School, a popular one.

A pedestrian area is also expected to be constructed on Jalan Sulawesi. In this area, the municipal government will only plan and socialize the program, while the residents will construct it on their own account because those living there are wealthy Chinese people.

On the other hand, Makassar city government will also construct a flyover in 2006-2007 on Jl Urip Sumoharjo-Jl Tol Reformasi-Jl Andi Pangeran Pattarani intersection. It takes Rp 30-40 billions from the public fund for the project. Although it is the idea of the province government, the municipal government is responsible for the land acquisition. According to M. Isran Ramli from Transportation Observer Task Network, it is not necessary to construct the flyover now for there is no congestion there. Furthermore, it is also against the mass transport development plan because the flyover will invite more private vehicle owners.

5.1. Conclusion

Makassar, like any other big cities in Indonesia, has not yet had good transportation system, including its public transport. Therefore, a commitment to develop a mass public transport needs to be supported, although simply started with studies and discourse building to public. If there is no discourse, it is even difficult to imagine that there will be awareness from the decision makers, operators, or the citizens to start revitalizing tis transportation system. Based on our SWOT analysis, we can map Makassar strength (potential) and weakness (obstacle).

Makassar strength:

1. There is willingness from the city government to develop bus-based mass transport. The willingness is embodied in its financial commitment particularly to fund the early study.
2. Makassar Mayor, Ilham Arief Sirajuddin, in 2005 had visited Curitiba, Brasil. Hopefully, the visit will make him easier to cooperate with. One of the financial commitments is the plan to construct 10km sidewalk cost Rp. 2.5 billions this year.
3. Makassar Organda can accept the plan as long as they involve in the plan since the beginning, not suddenly.
4. There are many roads in Makassar which are wide enough and one-way streets.
5. There are lots of NGOs dealing with people empowerment that can work together for a change.
6. Lots of scholar people with concerns to revitalize transportation system in Makassar.
7. There are many areas potential to be developed into pedestrian or NMT lanes, such as Jl. A. Yani, Sudirman, Sam Ratulangi, Sulawesi, Somba Opu and along Losari Beach.

Weakness:

1. Political intervention from the central government is quite high because the current Mayor is from Golkar Party with strong political affiliation with Vice President Jusuf Kalla. Therefore, it is no easy to refuse any project from the central government

although it is not appropriate for the city, such as the urge to build a flyover or to stop the TransSulawesi train.

2. There is inconsistency in realizing a vision or emphasizing a regulation. For example, Cendrawasi Square has received its Building Permit without any traffic impact analysis. In reality, the construction will add quite high traffic volume that can cause traffic congestion.
3. There is no awareness from decision makers to have a participative planning in order to minimize people conflict or resistance over a new policy.

5.2. Recommendation

Makassar can be considered to receive GEF financial support especially in developing mass transport and NMT lane, developing a more comfortable new becak design, and pedestrian area.

Because the social problem is more complex, it takes a long time to prepare the project. Seen from the priority, Makassar will lie after Batam. Success potential is higher in Batam because the social clash is not really apparent. Furthermore, Batam success will be more notably because it is strategically located near to Singapore.

SEMARANG, INDONESIA – SCOPING AND REPLICABILITY REPORT

Report by Instran

A. A BIRD'S EYE VIEW OF SEMARANG

Semarang is the biggest city in Central Java and also the Capital of Central Java Province. As the Capital, Semarang is the center for industry, trade, and government that manages 34 cities and municipal areas in Central Java. Its population reaches 1.3 million people with 373.7 square kilometer area. The average temperature is 27.4° C.

With its infamous Tanjung Emas Port, Semarang is an entrance gate for foreign merchants to other cities in Central Java. Many ships, big or small, dock in this northern part of Semarang. In addition, there are Ahmad Yani Airport westward, Terboyo Central Bus Station in north east part, and Tawang Central Train Station in northern part.

Geographically, Semarang is divided into two areas with two different climates, hot and cool. City area with hot climate is the lower part of the city while the cool climate is the down town area that lies on the slope of Mount Ungaran.

The center of Semarang city lies in the northern part. There are office buildings, trade centers, traditional market, shops, factories, port, schools, hotels, hospitals, restaurants, etc.

meanwhile, the southern part or the upper city part is cool and located on side hill with beautiful scenery. There are lots of villa and hotels here as a rest and recreation place.

B. OBSERVATIONS ON PEDESTRIAN, NMT, AND PUBLIC TRANSPORT

- **Pedestrian**

Simpang Lima is the heart of the city. It is a joint of five arteries namely Jalan Ahmad Yani, Pahlawan, Pandanaran, Gadjah Mada, and Ahmad Dahlan. On Simpang Lima round-about, the sidewalk is relatively wide; 6-8m, partly in black and partly red. However, according to several sources, the sidewalk had been divided into blocks by Market Agency officers and then sold to street vendor owners. Therefore, the sidewalk is full of street vendors and parking activities day and night. Meanwhile, along Jalan Ahmad yani, Pahlawan, Pandanaran, Gadjah Mada, and Ahmad Dahlan, the sidewalks are about 3-4m. They have been converted into street parking lot in daylight and street vendor locations at night. There is no empty space around the area to be used as a parking space.

- **NMT**

There are not many becak in Semarang. Most of them are scattered on several road segments and in group of 5-10 drivers. The highest volume is on Simpang Lima, which is about 50 drivers day or night. Meanwhile, most bicyclists are in Kaligawe and Pedurungan (east Semarang) industrial areas. They are factory workers going for or returning from work. Geographically, Kaligawe is located on lowland with quite a heavy burden. It is an industrial area without a good side tunnel. When sea level is up, water can flood the road up to 20cm. It obviously damages the roads here. This year, there is a plan to improve Kaligawe roads using Strategic Road Infrastructure Project fund from the World Bank. In Pedurungan area, bicyclist volume is still high. There are bicycle lanes on several roads although not physically separated. Nevertheless, the lanes are currently occupied by parking and street vendors.

- **Public Transport**

Motorized vehicles, non-motorized transports and pedestrians in Semarang are still in mix traffic. On institutional level, there is overlapping in decision making. For example, route permit is issued by two institutional bodies: Transportation Agency and Public Works Agency legalized by Traffic Police. Generally, the fare is fixed by the government, but any deficit is the risk of the bus company, and then transferred to the bus crews. This moment, regional government operates Patas AC bus to serve passengers from hotel to hotel. The bus is coined City Transport and only operated in Semarang City. Meanwhile, Organda has proposed the operation of Patas AC bus to Central Java Province and Semarang City Government for Penggaron-Mangkang, and Terboyo-Taman Unyil with flat rate Rp 5000. Nonetheless, until now, the proposal has not received any response from the decision makers.

Problems:

1. There are traffic congestion, pollution, health risk, productivity decrease, etc.
2. Sidewalks in city center are relatively wide, but have been occupied by street vendors. As the consequence, after getting down from a bus, passengers have to go through all those chaos in Simpang Lima and Pasar Johar. Pedestrians, non-motorized transports and motorized vehicles are in mix traffic.

3. The city government and street vendors are blaming each other. The government blames street vendors for taking over public spaces such as sidewalks. However, government legalizes their existence by drawing Rp 1000 per day from them as retribution, even Rp 2000 per day. With the retribution, street vendors feel that their locations are legal and they are angry when being removed.
4. The administration never suggests that the residents reduce the use of motorized vehicles, cars or motorcycles. Instead, they construct more toll road and widen the roads. As the result, Semarang is flooded with motorized vehicles and public transports are neglected.
5. There is no synergy among city agencies. For Market Agency, the most important thing is how to get as much retribution as possible, while Public Order Agency always tries to manage the street vendors.
6. Public transport policy is unclear. Before the economical crisis (1997), there was a policy to replace three public transports (with 12 people capacity) with minibus, but the policy was cancelled after the crisis. What have been done is revitalizing them.
7. Public route permit in Semarang is issued by two institutions, which are the Transportation Agency and Public Work Agency with additional legalization from Traffic Police. For example the route of Indra Plaza Route heading for Pekalongan - Semarang.
8. The existence of a mall can change the character of street users. For xample, after the development of Jawa Mall and Metro Plaza, passengers do not want to wait for public transport at the bus stop but right in front of those two malls; whereas, there are lots of parked cars there. When the traffic is congested, the mistake is put on the bus crews. The same condition occurs on Jalan Majapahit. Because half of the street has been converted in parking space, traffic congestion is inevitable.
9. Public transports staying too long in a place bring disadvantages to its passengers. Passengers such as students can be late to school because their transport do not go anywhere for quite some time.
10. Bicycle lanes on Deresan, Pederungan, Jalan Dr. Cipto, Majapahit and Mataram have no longer existed. The city administration also never urges its citizens to bicycle or walk; instead, residential areas are built far from business centers.
11. The government also never advises its residents to use public transports whether through campaign or progressive tax for those owning more than one motorized vehicles.
12. There is no common ground between the citizens and its government in resolve congestion problems in the city. For example, there can be many aspects considering street vendor issue. The sellers feel right because they pay some retribution. The Tax Agency has no qualm because they feel it is their responsibility to draw the retribution. Meanwhile, the Public Order Agency feels that the street vendors have obstructed the function of the street.
13. There is public participation in planning a transportation system.
14. The variety of public transport companies in Semarang: some establish high daily deposit, some low. The same tendency is that every public company will hire private security service. Every public transport, thus, has a code of the security officer to whom drivers must share their income. This is a heavy burden for both the driver and the bus owner. For a paratransit, for example, they have to pay Rp. 2500 per day and Rp. 40,000 – Rp. 50,000 per bus fleet.
15. The government controls bus tariff but gives no subsidy at all.

Potentials:

1. Based on a research by Djoko Setijowarno a lecturer from Soegijapranata Catholic University, there are at least 5-7 potential busway corridors in Semarang. One is Kedang Sepur. The most important thing is conducted a test for the corridors, no matter how many will be tested. It is also important to think about subsequent possibility of traffic congestion.
2. There is a potential to construct bicycle lane in Semarang, particularly upper Semarang with its cool air. It is also likely to construct it in lower Semarang as long as there also lots of shady trees planted along the streets.
3. Semarang Organda is willing to develop a mass transportation alternative as long as they involve in it since the beginning and be a member of the consortium managing the busway.

BATAM, INDONESIA – SCOPING AND REPLICABILITY REPORT

Report by Intran

Introduction

Batam is a city in Riau Islands Province (Kepri), especially since 2002. Before 2002, there was only Riau Province, which was then divided into two: Riau Province and Riau Islands Province after the political reform. Batam City itself is a new city led by a mayor in these recent 10 years as previously managed by an independent body called Batam Authority. In the new order era, the Batam Authority was directly chaired by the Minister of Research and Technology B. J. Habibie. After led by a mayor, there are two important institutions in Batam: the Batam Authority and the City Government. The Batam Authority will conduct the infrastructure development while the government deals with the regulation. However in reality, there is overlapping in technical projects as the government also has the Public Work Agency, Parks Agency, Irrigation Agency, etc. that should also have the responsibility to construct the city.

1. Transportation

Transportation in Batam is dominated by motorized vehicles, both private car and motorcycle. Averagely, motorized vehicle growth reaches 17.5% per annum, much faster than the snail growth of public transports, such as minibus, truck, and box car. It is particularly caused by the relatively lower price of car in Batam in comparison with in other cities including Jakarta. The low price is in line with the Singaporean policy to limit vehicle age. The vehicle exceeding the age limit will be sold cheaply to Batam with the consequence of high emission risk. Meanwhile, motorcycles are sold out because public transports give expensive fares and bad service; therefore, the people choose to drive a motorcycle as it is considered more practical, efficient, and effective. With motorcycle, they can go wherever and whenever they want with relatively lower cost. In addition, motorcycle credit system is

easy and also cheap. Considering this, it is not uncommon that every year more or less 18,500 units of motorcycle are sold. The detail of motorized vehicle number in Batam can be seen from the table below.

Vehicle type	Motorized Vehicle Number		
	Year		
	2002	2003	2004
Passenger car	26,815	29,952	33,453
Goods car	8,369	9,004	9,501
Minibus	1,030	2,338	2,514
Motorcycle	63,019	84,379	102,060
Total	99,233	125,673	147,528

Source: Batam Transportation Agency

1.2. Public Transport

Type of public transport in Batam is quite varied: minibus, L300 colt, carry colt, DAMRI bus, and taxi. This last type of public transport in Batam is different from taxi in other cities. **First**, taxi in Batam is a kind of car sharing; the passengers may not know each other. It means that after boarding a passenger, the taxi driver can look for other passengers to carry together. The taxi will start to operate after it is full, unless we want to book the taxi privately (for 4-5 people). **Second**, the taxi drivers do not use meter to count the fare. The fare will be based on the distance. The system creates difficulty for seasoned passengers who are not familiar with the city and get a dishonest driver asking for higher fare. **Third**, besides the usual yellow vehicle number plate, there are lots of black plated taxis. Those are personally owned taxis. A number of sources said that those taxis are owned by government officers, police, or military men. Crimes rate high in black plated taxis because it is difficult to trace the owners. Crimes can be done by the drivers to their passengers or by passengers to the others. With the car sharing system, it is indeed difficult to detect which is the real passenger and which one is a criminal.

This terrible public transport system with no guarantee over fare, security, safety, comfort, and punctuality creates difficulties for seasoned passengers, people occasionally visiting Batam. They are plagued and terrified with dangerous possibilities of utilizing public transport. I was lucky then to meet a driver of motor-taxi from Madiun (East Java) to make the communication easier and give a secure feeling while travel, although I have to pay more in comparison with taking a public transport.

The condition mentioned above was admitted by Batam Mayor Manan Sasmita. In his speech while receiving six buses from Transportation Department on 23rd January 2005, Manan revealed that Batam was labeled the dirtiest city with low level of public service. The problem now is that people expect to get a better transportation service but the government and citizens' ability to afford transportation cost is still low. The citizens cannot afford to pay more for transportation and the government cannot even afford to provide decent transportation service.

2.1. Busway System

In July 2005, the Transportation Department through the General Directorate of Land Transportation granted seven minibuses with the capacity of 50 passengers to be operated in

Batam and named Bus Pilot Project (BPP). The buses are operated by DAMRI Public Company with Corridor I covering Batam Center – Sekupang. The specifications of Corridor I are:

Route (Corridor I)	: Batam Center – Sekupang
Bus unit	: 7 units, one bus covering 8 rounds per day
Length	: 18.9 km
Travel time	: 45 minutes
Headway	: Peak hour 20 minute, non peak hour 30 – 60 minute
Bus stop	: 23 units (based on passenger concentration)
Capacity	: 21 passengers sitting, 29 standing
Operation hour	: 06.30 – 17.00
Tariff	: Rp. 3,000 per public passengers and Rp. 1,500 for students
Subsidy	: Rp. 9,000,000/month/bus
Income	: Rp. 250,000 – 300,000 per day
Diesel cost	: Rp. 150,000/day/bus
Driver salary	: Rp. 40,000/day
Contract I period	: 17 th July 2005 – 18 th January 2006

Source: Husni Husin, head of Batam DAMRI

On 23rd January 2006, General Director of Land Transportation in the Transportation Department, Ir. Iskandar Abubakar gave another six bus units. According to Batam Transportation Agency head H. Yusron Roni, those buses would serve Corridor II, Batu Aji – Batam Center and Jodoh, as long as 22 km. It is expected that Corridor III will have been operated by 2007. Below are the specifications of BPP Corridor II:

Route (Corridor II)	: Batu Aji – Batam Center and Jodoh
Bus unit	: 6 units
Length	: 22 km
Travel time	: unplanned
Headway	: unplanned
Bus stop	: unavailable
Capacity	: 24 passengers sitting, 39 standing
Operation hour	: 06.30 – 17.00

Source: Husni Husin, head of Batam DAMRI

According to Ir. Djamal (City Transport Section of Transportation Department), by 2009, the Transportation Department targeted 17 big cities in Indonesia to be served by this BPP. They are: Batam, Medan, Pekanbaru, Padang, Palembang, Banjarmasin, Jakarta, Tangerang, Bekasi, Bogor, Banten, Bandung, Semarang, Yogyakarta, Surabaya, Malang, Makasar, and Ambon.

Batam is the first city to test the bus operation with the ‘buy-the-service’ system. In the first contract from 17th July 2005 to 17th January 2006, Transportation Department gave Rp. 400 millions to subsidize the operation of the seven buses for six months, including its maintenance. In 2006, the contract value is increasing into Rp. 1.1 billions to operate and maintain 13 buses (Corridor I and II). Meanwhile, the city government contributes the effort by providing the bus stops. BPP has provided an alternative choice in utilizing public transport, which is safer, more comfortable, and have a fix tariff and time for Batam citizens.

Features differentiating BPP from other public transports in Batam are the implementations of principals developed in a general BRT system:

1. The bus and fleet are larger which mean more larger capacity
2. It is operated with the 'buy-the-service' principals
3. Drivers do not directly receive money from the passengers
4. Tickets can be purchased in each bus stop
5. The bus only stops at the bus station
6. An air conditioned bus
7. Having clear headway and operation hours
8. Besides providing the bus with seats, it also has hand holds such as busway in Jakarta; thus, the bus capacity is higher while maintaining the passenger comfort.

The differences from busway in Jakarta are:

1. Special lane is unavailable. So the bus is still in the mix traffic.
2. There is no network with feeder transport and walking mode.
3. Bus stop is open and has not been designed well
4. It tends to be inaccessible by physically disabled people (difables, elderly people, children, and pregnant women).
5. Bus Pilot Project has not been managed by an independent body. It is managed by DAMRI, a public company under the Transportation Department.
6. The tariff is different for public passengers and students.

Problems appearing in BPP now are:

1. Before fuel price hike on 1st October 2005, there were only 2-3 passengers. Now, the load factor has reached 70%, even overcrowded during rush hours.
2. Cost expenses particularly to pay ticket sellers in each bus stop (23 bus stops) are incomparable with the number of passengers served. Therefore, Husni Husin (Batam DAMRI director) was asking whether there was a more efficient ticket selling that could also prevent money leak from the passengers.
3. The route and fleet are limited (only one corridor, and seven buses).
4. The contract renewal process is not a simple one. It has to go through a tender process that takes at least 45 days as a part of the national mechanism. On the other hand, the bus has to keep serving the citizens. The uncertainty during the process creates difficulties for the operator because at there will be no ticketing officer in the bus stop. As the consequence, the company will place an officer in the bus. However, it will cause further problems, particularly on its transparency, which is how far the ticketing officer in the bus cannot be in collusion with the driver. This transparency problem has been highlighted by the mass media.
5. BPP Corridor II operated this year is in parallel with the existing DAMRI bus routes covering Batu Aji – Batam Center – Jodoh – Batu Merah. This route parallelism will not create problem as long as they are all operated by DAMRI because it will then depend on its internal management. Nonetheless, if in the future BPP is operated by an independent body such as TransJakarta, the parallelism will be a great problem and one side has to be marginalized, probably DAMRI is.

2.2. Busway Potential

This BPP program is the beginning of mass transportation development plan in Batam as until now, the city does not have a mass transportation. Whereas, as an industrial and trade city with close geographical relationship with Singapore and high Singaporean mobility to Batam, it is time to develop a mass transportation system. The effort is realized with the municipal government to allocate Rp. 36 billion for 2005-2010.

The reasons why it is potential to develop busway and pedestrian facilities:

1. There is busway embryo in the form of Bus Pilot Project since 2005.
2. There is the commitment from the government to develop a safe, comfortable, punctual, and affordable mass transportation for all citizens.
3. Main roads in Batam are wide enough. Even according to Bambang Hartanto (member of Batam MTI and a staff in Batam Transportation Agency), the size of the area of Batam main roads reaches 200m. This area is wide enough to construct bus lane, NMT, and pedestrian facilities. In addition, there is no strong resistance from the citizens. Indeed, technically, it is very easy to construct busway on the right side of the street, such as in Jakarta, as there will be no congestion on the mix traffic. Besides, travel distance from one place to another place is quite far (above 15km) which is appropriate for busway.
4. Batam City itself is a new city. It has been grown as an industrial city since 1980s, and administratively, it is a city in 2001. As a new, industrial city, Batam municipal government intends to present an image of a friendly city with a good mass transportation system.
5. Public transport service is very bad and the tariff is unclear, which give no comfort for Batam visitors.
6. The location of resident areas with business, shopping and entertainment centers are quite far, and can only be connected by a fast mass transport in order to reduce the fare.
7. There is no NGO focusing on transportation issues; thus, a mayor's authority to make a decision is still high. If the mayor is given a good technical support to realize the improvement of mass transport, the effort will run smoothly as there is no strong resistance from the citizens.
8. The ridership potential is high. Twice I tried to take BPP: first on 23rd January from Sekupang to Batam Center at 10 am and second on 24th January from Batam Center to Sekupang at 2.30 pm. Those were non peak hours, yet the bus was overcrowded.
9. By 2007, all public transports have to be replaced with new fleets. Since the beginning the public transport permit is only a temporary one (since 1997) when there was no system to manage mass transport.
10. Fleet owners joining in Batam Organda (Organization of Land Transportation Owners) do not mind, even happy, to be in the consortium to run BPP or later busway, just like in Jakarta. Batam Organda expects to be the operator of BPP; however, the government alone cannot decide so for the criteria and requirements need further discussions with other stakeholders. One of the criteria is that the member of consortium should be an experienced not seasoned public transport company. Organda also suggests that the government policy should be supported by clear financial body to help the member in its investment.
11. Batam Organda is also interested in utilizing CNG fueled buses that generate little pollution. Nonetheless, the problem is CNG supply in Batam is not even enough for household need.

2.3. Integrating Busway and NMT

NMT modes in Batam are mostly walking and bicycles. There is few becak. Close-distance transportation is served by motor-taxi. The number of bicycles is also smaller in comparison with other cities. However, it does not mean that the bicycle potential is small. It is more likely because there is no bicycle lane. Seen from its resident composition, there are lots of manufacture laborers with low wage in Batam; therefore, bicycle facilities will help them to mobilize with lower cost for transportation. Bicycle lane is also needed by those living in residential compound located only 1-2km from the road. Meanwhile, a large pedestrian potential can be found in Nagoya, a shopping, mall, hotel, and entertainment center, like Mangga Besar or Kota in Jakarta. It can also be found in Batam Center, an office and mall center as well as the gate to Singapore. On both locations, there are an abundance number of pedestrians, but not a good pedestrian facility. On some locations, there is no sidewalk at all or bad constructed sidewalk, so it is inaccessible for all people.

1. Conclusion

Batam can be chosen as the second city to develop BRT in Indonesia, integrated with the NMT improvement, because road infrastructure in Batam make it possible. Arthur has seen Batam road photos and said that the opportunity to develop a better constructed BRT system in this city is big. Furthermore, Batam municipal has also committed to improve its mass transportation into a safe, comfortable, punctual, and affordable one.

2. Recommendation

It is necessary to have ITDP experts visit Batam to give some advices to the city government on the improvement of its BPP or the preparation for fully developing a BRT system.

SUMMARY REPORT ON OTHER CITIES BY PUSTRAL