

Country Name	Project for Improving Public Transportation in Hanoi
Socialist Republic of Viet Nam	

I. Project Outline

Background	<p>In Hanoi City, traffic congestions had worsened due to the rapid increase in the number of vehicles. Thus, the “Transportation Plan of Hanoi City toward 2020” was formulated in 2008, and development of Urban Mass Rapid Transit (UMRT) such as subway and Bus Rapid Transit (BRT) was to be initiated with assistance from Japan, France, the Asian Development Bank (ADB) and the World Bank. Under the circumstance, it was required for bus transportation to strengthen a wide area network as a feeder transport in conjunction with UMRT such as subway, and it was also required to improve convenience and comfort in the public transportation as a whole. However, the level of service of bus transportation in Hanoi at the time of ex-ante evaluation was not necessarily high, and it was an urgent issue to promote comprehensive efforts (capacity development) in the city for service improvement of bus transportation and improvement of road transport and control of private transport modes by the Hanoi Department of Transport (HDOT) in cooperation with the traffic police etc.</p>														
Objectives of the Project	<p>Through improving capacities of the related organizations in Hanoi to conduct public transport planning and management, infrastructure development, traffic control/management, promotion of modal shift from private transport modes to public transportation and implementing improvement measures on public bus services to meet the needs of bus users, the project aimed at improving public transport management capacity of the related organizations in Hanoi, thereby promoting an increase of the number of public transport users and improvement of convenience and comfort of bus transportation.</p> <ol style="list-style-type: none"> Overall Goal: In Hanoi, user of public transport is increased in number, and bus transportation becomes more user-friendly and comfortable. Project Purpose: Public transport management capacity of the related organizations in Hanoi is improved through pilot activities for promoting public bus transportation. 														
Activities of the Project	<ol style="list-style-type: none"> Project Site: Hanoi City Main Activities: (1) Develop a database for public transport planning, and analyze the most appropriate bus networks and bus fare and subsidy policies; (2) Analyze implementation of pilot activities for bus-priority lanes, bus-priority traffic signal control system, and changes of bus stop locations for improving convenience of bus transfers and pedestrian (pilot activities were not implemented due to the lack of budget); (3) Conduct public debate sessions on urban transport problems and UMRT development in Hanoi, establish the Journalist Club, conduct activities to increase people’s awareness on existing problems in urban transportation and promote public transportation, and develop manuals and conduct group activities on mobility management to promote transition from private transport modes to public transportation; and (4) Provide on-schedule bus operation services based on time tables in important bus routes in suburbs, develop instruction manuals on safe bus driving, and conduct an IC card introduction pilot project etc. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Vietnamese Side</td> </tr> <tr> <td>1) Experts: 18 persons</td> <td>1. Staff Allocated: 58 persons</td> </tr> <tr> <td>2) Trainees Received in Japan: 7 persons</td> <td>2. Project office</td> </tr> <tr> <td>3) Trainees Received in Third Countries (Thailand and Malaysia): 11 persons</td> <td>3. Local operation cost</td> </tr> <tr> <td>4) Equipment: equipment for the IC card introduction pilot project, servers, computers, printers and scanners etc.</td> <td></td> </tr> <tr> <td>5) Local operation cost</td> <td></td> </tr> </table> 			Japanese Side	Vietnamese Side	1) Experts: 18 persons	1. Staff Allocated: 58 persons	2) Trainees Received in Japan: 7 persons	2. Project office	3) Trainees Received in Third Countries (Thailand and Malaysia): 11 persons	3. Local operation cost	4) Equipment: equipment for the IC card introduction pilot project, servers, computers, printers and scanners etc.		5) Local operation cost	
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Project Period	July 2011 – June 2015 (Extension Period: July 2014 – June 2015)	Project Cost	(ex-ante) 320 million yen, (actual) 516 million yen												
Implementing Agency	Hanoi Department of Transport (HDOT)														
Cooperation Agency in Japan	Ministry of Land, Infrastructure, Transport and Tourism, ALMEC Corporation														

II. Result of the Evaluation

<Constraints on Evaluation>

- There are gaps among Outputs > Project Purpose > Overall Goal in the assumed steps (logics) for tackling development issues stated in the Project Design Matrix (PDM, a matrix which shows the project framework) of this project. In particular, promotion of transition from private transport modes to public transportation through opening of UMRT and BRT in Hanoi is required for achieving the Indicators 1 to 3 of the Overall Goal, however, this was not stated in the PDM and UMRT was not yet operated by the time of ex-post evaluation. Thus, the achievement level of Overall Goal indicators at the time of ex-post evaluation was limited. However, as stated below, various measures analyzed under this project have been incorporated into the development plan of Hanoi city and implemented by the city’s efforts since project completion, and thus in this ex-post evaluation, the evaluation was conducted taking into account various measures implemented after project completion and gaps of PDM logics as supplemental information.

<Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Viet Nam’s development policy such as “development of public transportation networks including UMRT” and “reducing traffic congestions” as set forth in the “Transportation Master Plan for Hanoi City until 2020” (approved in 2008) and the “Transportation Plan of Hanoi City toward 2020” (formulated in 2008 and effective at the time of project completion) at the times of both ex-ante evaluation and project completion.

<Consistency with the Development Needs of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Viet Nam’s development needs for improving convenience and comfort of bus transportation as a feeder transport for promotion of the use of UMRT which was under construction in Hanoi, at the times of both ex-ante evaluation and project completion.

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan’s ODA policy as stated in the “Country Assistance Program for Viet Nam” (2009), which included “development of urban transportation” under “promotion of economic growth and strengthening of international competitiveness”.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was partially achieved by the time of project completion. While various activities were implemented under the project in order to promote the use of bus transportation, activities which involve facility improvements such as the bus priority lanes pilot project (including bus-priority traffic signal control system and changes of bus stop locations for improving convenience of bus transfers) could not be implemented due to the lack of budget in Hanoi city. The pilot activity on bus operation services based on time tables (departure/arrival time display in major bus stops), which was planned in the same section as the above pilot project, was also limited to providing time at the point of departure only¹. However, the pilot activity on service improvement such as safe bus driving and the improvement of customer service from bus crews was successfully implemented. In the IC card introduction pilot project targeted at bus commuter pass users on the bus No.6 (the section between Hanoi station and Cau Gie), development and operational testing of the IC card issuing and renewal system and the on-board verification system were conducted. However, many problems were encountered in each system, which required one-year extension of the project period and countermeasures for improvements.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have partially continued to the time of ex-post evaluation. The activity on safe bus driving and the improvement of customer service from bus crews has continuously been implemented since project completion. The activity has been incorporated into mobility management and trainings at Hanoi Urban Transport Management and Operation Centre (TRAMOC), which is a subordinate organization of HDOT, bus operators, Hanoi Public Transportation Association and Hanoi Traffic Safety Committee. Provision of departure time at the point of bus departure has also been continued, and a smartphone application which provides a real-time bus operation status has been developed and used by many users. However, regarding the IC card introduction pilot project, while the system developed under the project was utilized until December 2015, it has not been used since then. The reasons are: (1) the system has not been operated stably including unstable internet connection, and (2) IC cards to be used in the system became out-of-stock and SIM cards for the communication devices also expired².

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been partially achieved by the time of ex-post evaluation. Various measures analyzed under this project have been incorporated into the development plan of Hanoi city and implemented since project completion as follows: (1) changes/additions of bus stop locations for improving convenience of bus transfers (1,340 bus stops in total were newly established and 214 bus stops in total were relocated between 2016 and the first half of 2019), (2) bus-priority in several intersections in the city, (3) renovation of approximately 26km of sidewalks along roads which have many bus routes in the city for improving pedestrian environment, and (4) reduction of congestion in intersections by traffic control (the number of congested intersections in the city decreased from 124 in total in 2010 to 33 in total in 2018). However, regarding the Indicator 1 (travel time/speed of bus transport), according to TRAMOC, the average traveling speed of buses running within and around Hanoi city in April 2019 was 23.8km/h, of which the average speed of buses running inside of the city was 16.7km/h. It is not possible to judge whether the travel time/speed has been improved or not, as no survey on bus speed was conducted before project implementation until the time of ex-post evaluation. However, based on the situation where the number of private cars and motorbikes has increased and construction works of large facilities have been undertaken in the city, it is considered that the travel time/speed has not been improved since project completion. In this connection, regarding the Indicator 2 (the number of public transport passengers), the number of bus users in the city decreased at the time of ex-post evaluation (2018) compared with the number before project implementation (2011) by 6% (the number of bus users in 2011: approximately 483 million per year, the number of bus users in 2018: approximately 455 million per year). On the other hand, the number of users of BRT Line 1 (Kim Mã - Yên Nghĩa), which started operation in 2017, increased by 6% from 2017 to 2018 (the number of BRT Line 1 users in 2017: approximately 5 million, the number of BRT Line 1 users in 2018: approximately 5.3 million). TRAMOC analyzes that what was learned from this project such as introduction of priority bus lane which enables on-time operation based on time tables and provision of convenient bus services including information boards and audio guidance on a bus, which were all effective under the project, has been utilized in BRT. Regarding the Indicator 3 (perception of the public transport users), while there is no comparative data, according to the results of the assessment survey of the quality of public bus transport for passengers conducted by the University of Transport and Communications in 2016³, as evaluation of bus services as a whole, 20.77% answered “good/relatively good”, 49.54% answered “moderate”, and 29.69% answered “relatively bad/bad”.

¹ This activity was planned to display time in major bus stops based on the condition that smooth bus operation would be assured by the bus priority lanes pilot project. As the bus priority lanes pilot project was not implemented, this activity was limited to providing time at the point of departure only.

² While the system developed under the project has not been utilized since 2016, the experience and lessons learnt from this project has been effectively transferred to the implementation of “Project for Supporting Development of Interoperable Smart Card System for Public Transportation in Hanoi (2017)”, which aims to introduce IC cards to the public transportation system, including bus services, in Hanoi city.

³ The breakdown of the survey respondents was not available.

Over 80% answered that there was no problem regarding the number of bus stops, and over 90% answered “higher than moderate” for customer services provided by drivers and crews, while over 90% answered that improvements were necessary for appropriateness of bus routes. On the other hand, the proportion of BRT users who shifted from private modes of transport to BRT was 58.6% in 2018, increased by 36% from 2017, and thus, it is considered necessary to improve bus routes by increasing connectivity with BRT.

<Other Impacts at the time of Ex-post Evaluation>

No negative impact on natural environment has been observed and no land acquisition or resettlement has been occurred under the project.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) Public transport management capacity of the related organizations in Hanoi is improved through pilot activities for promoting public transportation.	The pilot corridor is successfully implemented and bus service on this pilot corridor is improved.	Status of the Achievement: partially achieved (partially continued) (Project Completion) The pilot activity on safe bus driving and the improvement of customer service from bus crews and the IC card introduction pilot project were successfully implemented. However, the pilot activity on bus operation services based on time tables was limited to providing time at the point of departure only, and the bus priority lanes pilot project was not implemented. (Ex-post Evaluation) Since project completion, the activity on safe bus driving and the improvement of customer service from bus crews and provision of departure time at the point of bus departure have continuously been implemented, however, the IC card introduction pilot project has not been continued.
(Overall Goal) In Hanoi, user of public transport is increased in number, and bus transportation becomes more user-friendly and comfortable.	1. Travel Time/Speed	(Ex-post Evaluation) not achieved It is not possible to judge whether the travel time/speed has been improved or not due to the lack of information. However, it is considered that the travel time/speed has not been improved based on the situation where the average traveling speed of buses running within and around Hanoi city in April 2019 was as low as 23.8km/h, of which the average speed inside of the city was as low as 16.7km/h, the number of private cars and motorbikes has increased and construction works of large facilities have been undertaken in the city.
	2. Number of public transport passenger/ modal share of public transportation	(Ex-post Evaluation) partially achieved The number of bus users in the city was decreased at the time of ex-post evaluation (2018) compared with the number before project implementation (2011) by 6%. However, the proportion of BRT users who shifted from private modes of transport to BRT was 58.6% in 2018, increased by 36% from 2017.
	3. Perception of the public transport users	(Ex-post Evaluation) partially achieved While there is no comparative data, according to the results of the assessment survey of the quality of public bus transport for passengers conducted in 2016, as evaluation of bus services as a whole, 20.77% answered “good/relatively good”, 49.54% answered “moderate”, and 29.69% answered “relatively bad/bad”.

Source: Project Completion Report, the questionnaire survey and interview with HDOT, the assessment survey of the quality of public bus transport for passengers conducted by the University of Transport and Communications (2016)

3 Efficiency

Both the project cost and project period exceeded the plan (ratio against plan: 161%, 133%, respectively). However, the IC card introduction pilot project was added to project outputs during project implementation, and the planned project cost was revised to 504 million yen and the planned project period was revised to 48 months. Comparing the revised plan and result of the project cost and project period, the ratio against the plan was 102% and 100%, respectively. Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

The needs for promoting the use of public transportation in Hanoi city are stated in the “Resolution on approving the plan to strengthen road transport management for reduction of traffic congestions and environmental pollution in Hanoi city in period 2017 - 2020 and vision to 2030” (resolution number 04/2017/NQ-HDND issued on July 4th 2017) and the “Resolution on prioritizing the development of mass public passenger transport system, encouraging investment in the construction and operation of bus terminal and parking, application of high technologies in managing and operating the transportation system” (resolution number 07/2019/NQ-HDND issued on July 10th 2019).

<Institutional Aspect>

Main organizations related to promotion of the use of public transportation centering on improvement of convenience and comfort of bus transportation in Hanoi city are TRAMOC, which is a subordinate organization of HDOT, and Transport and Services Corporation (TRANSERCO). TRAMOC is in charge of approval of bus routes planning/routes, analyses of fare policies, management and supervision of bus operators, subsidy management for bus operation, and activities for promoting the use of public transportation. The number of staff in charge of these tasks is 55 in total (one Deputy Director, Planning Department and Infrastructure Department:16, and Service Supervision Office: 38). According to TRAMOC, the number of staff is sufficient to properly undertake its tasks, as staff is assigned in the same way as during project implementation and planned tasks have been properly conducted every year. TRANSERCO is a state-owned enterprise in charge of bus operation services (a subordinate organization under Hanoi city People’s Committee), and the number of staff is approximately 7,000. According to TRANSERCO, the number of staff is sufficient to properly undertake its tasks, as it has been able to manage various works on bus operations (i.e. policy recommendations, promotion activities, development of bus networks, bus operations, facility procurement and operation of customer centers). It should be noted however, that it is expected that tasks on opening and O&M of UMRT, coordination with various public transport management centers in the city, management of interoperable IC card system and so on would increase in the city in future, and thus a system/structure to manage them needs to be established. However, it is still under consideration in the city.

<Technical Aspect>

Project counterparts (C/Ps) for whom necessary technical skills were transferred under the project still work at HDOT (including TRAMOC) and TRANSERCO. C/Ps have continuously implemented many transport planning related tasks in the city after project completion, and as stated above, various measures analyzed under this project have been incorporated into the development plan of Hanoi city and implemented, and thus, the level of knowledge and skills of HDOT (including TRAMOC) is considered to be sufficient. As for staff of TRANSERCO, in addition to the knowledge and skills acquired under the project, they have aimed at streamlining and improving operations through real-time bus operation management utilizing technologies such as GPS, RFID (radio-frequency identification device) and traffic monitoring cameras and provision of services to inform bus users of bus operation status by a smartphone application, and thus, their level of knowledge and skills is considered to be sufficient to properly undertake their tasks. Regarding staff training, Hanoi Public Transportation Association provides trainings for bus drivers and crews every year, in which approximately 1,000 to 5,000 staff have participated per year. TRANSERCO also conducts staff training every year, and 236 trainings for 3,317 bus drivers, crews and operators were conducted in 2018. Manuals produced under the project (the mobility management activity manual, training manual for drivers and crews and so on) have been used as reference materials in TRANSERCO. Equipment procured under the project has continuously been utilized, however, as stated above, equipment for the IC card introduction pilot project is no longer used.

<Financial Aspect>

The amount of subsidy allocation for bus businesses from Hanoi city to TRAMOC was 912 billion VND in 2016, 1,297 billion VND in 2017, and 1,697 billion VND in 2018. In addition, approximately 8 billion VND was disbursed for infrastructure development such as bus stops and approximately 2 billion VND was disbursed for promotion activities in 2018. As stated above, various measures analyzed under this project have been incorporated into the development plan of Hanoi city and implemented, and thus, it is considered that a sufficient amount of budget has been secured.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the institutional aspect of the implementing agency. Therefore, the sustainability of the project's effectiveness is fair.

5 Summary of the Evaluation

The project had partially achieved the Project Purpose at project completion, and it partially achieved the Overall Goal at ex-post evaluation. While a part of pilot projects was successfully implemented by project completion and various measures analyzed under this project have been incorporated into the development plan of Hanoi city and implemented through the City's effort by the time of ex-post evaluation, the achievement level of Overall Goal indicators was limited. Regarding the sustainability, a slight problem was observed in the institutional aspect. Regarding the efficiency, the project cost exceeded the plan.

Considering all of the above points, this project is evaluated to be partially satisfactory.

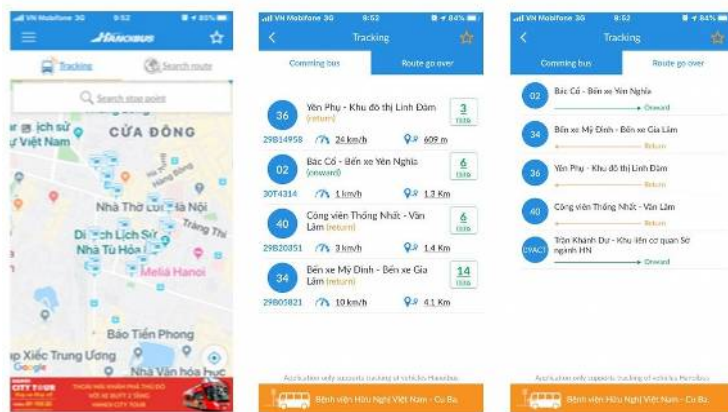
III. Recommendations & Lessons Learned

Lessons Learned for JICA:

- As stated above, there are gaps in the logics of Outputs > Project Purpose > Overall Goal stated in the PDM of this project, and evaluation indicators are largely affected by external factors (such as influences of the increase in private modes of transport on traffic congestion and bus speed). Therefore, it was difficult to properly evaluate this project. In future projects, the logical framework should be designed more carefully and appropriate indicators should be set at the beginning. Baseline data should also be obtained before project implementation and kept in order to evaluate the impact of the project properly.
- As stated above, the bus priority lanes pilot project could not be implemented due to the lack of budget in Hanoi city. For activities that require the budget approval and allocation from the C/P side, JICA should ascertain its sufficient feasibility before including them into the project.



Bus Operation Center in TRANSERCO



Home screen

Coming bus

Route go cover

Mobile Application for Searching Bus