

Socialist Republic of Viet Nam
Hanoi Transport Corporation Ltd
(TRANSERCO)

Collaboration Program with the Private Sector for
Disseminating Japanese Technology for
Bus Management and Operation Know-how
in Vietnam

Summary Report

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Japan International Cooperation Agency

Michinori Holdings, Inc.
Industrial Growth Platform, Inc.

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1. Background and Purpose of the Survey

1.1 Background and Purpose

In the center of Hanoi City, the traffic congestion problem is growing ever serious due to a large number of private transportations, such as motorcycles and cars. While it will take a while for urban railways to start their operation, which are currently on a planning phase or under construction, public buses play a critical role in public transportation for the time being. However, the public bus services in Hanoi City are faced with several problems, including lack of route network, operation management, and bus operators' discretion over their management. While Hanoi Transport and Service Corporation (TRANSERCO), the counterpart (C/P) of this survey, operates 90% of total bus services in Hanoi City, its 90 out of 110 routes are managed with public subsidy. The Director General of Hanoi Department of Transport (HDOT), understanding this financial situation, directly asked the proposing company Michinori Holdings Inc. for cooperation in solving this problem.

On this background, this survey had been conducted, aimed to establish sound implementation structure toward business expansion in order to provide all citizens in Hanoi City with safe and sustainable public bus services. This survey sets the goals as follows:

[Goals in terms of contribution to development challenges in the target country / region / city]

1. To formulate business foundation improvement plan of TRANSERCO
2. To formulate and build consensus among stakeholders on business expansion scenario
3. To conduct preceding and trial transfer and instruction of know-how

[Goals in terms of business expansion]

1. To formulate modernization plan for the transport network in Hanoi City
2. To demonstrate improvement with supports from Michinori Holdings

1.2 Technology to be Disseminated in the Survey

Utilizing know-how and human network Michinori Holdings possesses, this survey is aimed to conduct comprehensive improvement in the range from business management to on-site activities, including hands-on transfer of know-how in bus business management through dispatch of executives, introduction of best practices of Michinori Holdings Group and instruction of operation management skills both in Japan and Hanoi.

To begin with, activities mentioned above were conducted with TRANSERCO as a verification of this business.

1.3 Activities of the Survey

Items, activities and goals (prospective status at the completion of survey) to be implemented in the survey are shown in Table 1.3-1.

Table 1-1 Items to be implemented in the survey

No	Items	Activities	Goals (Prospective status at the end of survey)
1	Collection of information	<ul style="list-style-type: none"> ▪ Status of operation of bus operators ▪ Financial status of bus operators ▪ Market surrounding bus business ▪ Legislative systems related to bus business ▪ Analyze and share problems ▪ Coordination among stakeholders 	<ul style="list-style-type: none"> ▪ Basic information necessary for formulating business foundation improvement plan of TRANSERCO is collected. ▪ Current problems in bus business are clearly identified, and shared among stakeholders (Hanoi People's Committee, DOT, TRANSERCO and bus operators under TRANSERCO).
2	Formulation of business foundation improvement plan of TRANSERCO	<ul style="list-style-type: none"> ▪ Draft business foundation improvement plan ▪ Consensus building on management improvement plan with TRANSERCO ▪ Consensus building on bus transport improvement plan with other stakeholders 	<ul style="list-style-type: none"> ▪ Draft business foundation improvement plan is formulated for solving identified problems. ▪ Discussion with TRANSERCO over the draft is reflected to the business foundation improvement plan, and consensus is built with TRANSERCO. ▪ Consensus on business foundation improvement plan among stakeholders including bus operators is reached through discussion.
3	Implementation of pilot projects	<ul style="list-style-type: none"> ▪ Planning of pilot project ▪ Skill training for operation management ▪ Monitoring of certain routes based on bus operating key performance indicator (KPI) 	<ul style="list-style-type: none"> ▪ Together with TRANSERCO, some improvement measures are selected as pilot projects from business foundation improvement plan, and detailed plans are formulated. ▪ Skill training necessary to implement pilot projects is conducted. ▪ KPI is created, based on which monitoring is conducted.
4	Training in Japan	<ul style="list-style-type: none"> ▪ Preparation ▪ Implementation of training 	<ul style="list-style-type: none"> ▪ Documents necessary for trainees' visit to Japan is prepared, and training schedule is arranged. ▪ Skill of trainees both in business management and bus operating are enhanced.
5	Consensus building on the business expansion scenario	<ul style="list-style-type: none"> ▪ Formulation of draft business expansion scenario ▪ Update of business expansion scenario and consensus building ▪ Proposal of policy for dissemination of new technologies 	<ul style="list-style-type: none"> ▪ Based on items 1. to 4., draft business expansion scenario is formulated. ▪ Results of the pilot projects are reflected to business expansion scenario, and consensus is reached among stakeholders. ▪ Policies for dissemination of new technologies (regulation, subsidy policy, etc.) are proposed.

1.4 Schedule of the Survey

Schedule of the survey is shown in Figure 1.4-1.

Items	2018		2019										
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
1. Data Collection		New Year	Vietnamese New Year										
1.1 Current situation of bus operation (route, fare, ridership, service standard, data for population prediction, etc.)	■												
1.2 Financial situation of bus operators (financial statements, accounting analysis, governance structure, contract structure, etc.)	■												
1.3 Market related to bus business (willingness to pay for fare, current situation of other operators, PPP act, etc.)	■												
1.4 Legal documents related to bus operation (environmental regulation, regulation on foreign capital, consideration on gender and the vulnerable for traffic)	■												
1.5 Discussion among relevant bus operators (problem analysis and sharing among TRANSERCO and its subsidiaries)													
1.6 Coordination among stakeholders, understanding promotion for the business)													
2. Formulation of business foundation improvement plan for TRANSERCO													
2.1 Draft plan for management improvement (route, improvement of service, governance and profitability, finance)		□											
2.2 Consensus building with TRANSERCO on plan for management improvement (route, improvement of service, governance and profitability, finance)		■	■	■	□								
2.3 Consensus building with other stakeholders on plan for bus business transport improvement (route, improvement of service and governance)		■	■	■	□								
3. Implementation of pilot projects													
3.1 Plan for pilot projects		■											
3.2 Training for operation management skills				■									
3.3 Monitoring of selected routes through key performance indicator (KPI) for bus operation management				■	■	■	■	■	■	□			
4. Training in Japan													
4.1 Planning and preparation (invitation letter, visa, flight ticket, insurance, etc.)		■	■	■	□								
4.2 Implementation of training (management improvement, governance strengthening, education for drivers, safety management, operation management, etc.)						□							
5. Consensus building on business expansion													
5.1 Formulation of business expansion scenario		■											
5.2 Update and consensus building of business expansion scenario, based on the pilot projects							■		□	■			
5.3 Proposal of policy for dissemination of new techniques (regulation, subsidy policy, etc.)				■					□	■			
5.4 Discussion and consensus building (conclusion of MOU) on investment and establishment of new joint venture									□	■			
On-site activities	①		②		③				④	⑤			
Deliverables	△	Work Plan				△	Interim Report			△	Draft Final Report	△	Final Report

Figure 1-1 Schedule of the Survey

1.5 Implementation Structure

Implementation structure of the survey is shown in Figure 1.5-1. TRANSERCO, Hanoi People's Committee (HPC), Hanoi Department of Transport (HDOT), Hanoi Urban Transport Management and Operation Center (TRAMOC) were collaborated to implement the survey.

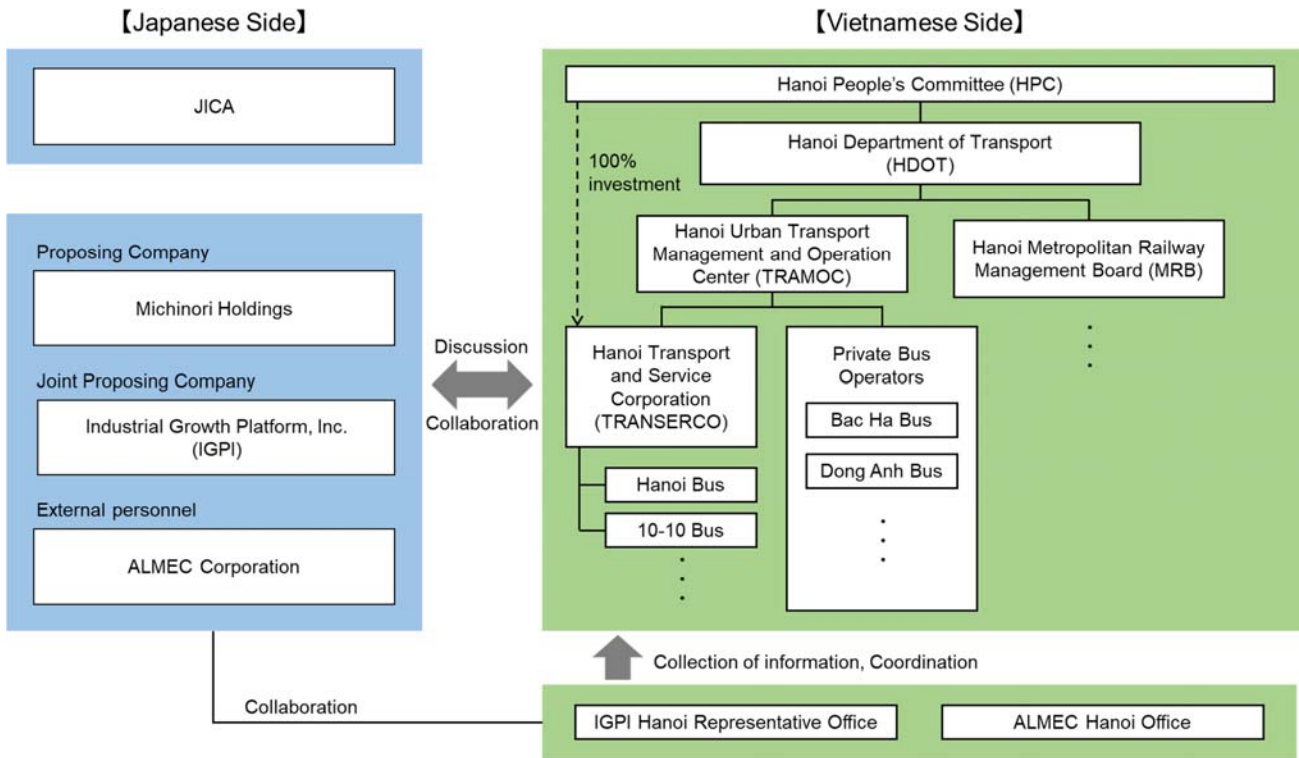


Figure 1-2 Implementation Structure

2. Achievement of the Survey (Contribution to the target country, region and city)

2.1 Formulation of Business Foundation Improvement Plan of TRANSERCO

At the kick-off meeting (10 Dec. 2018) in the period of the 1st on-site activity, Mr. Trung, Chairman of TRANSERCO, mentioned that TRANSERCO would offer related information, environment, places necessary for this study, and that implementation structure should properly be established by Mr. Nhat, Deputy General Director of TRANSERCO, designated as the leader of Vietnamese side. Managers of TRANSERCO were actively involved in the survey, and provided as much information as possible necessary for formulating TRANSERCO's business foundation improvement plan and business expansion scenario. Members of the survey were dedicated in bus ride in rush hour and site visit at bus operating offices to understand the actual condition in operation and monitoring. All of these activities facilitated formulation of business foundation improvement plan of TRANSERCO.

2.2 Formulation of Business Expansion Scenario and Consensus Building among Stakeholders

Formulation of business expansion scenario and consensus-building among stakeholders are essential for proposing companies to be deeply involved in on-site business. Through deep relationships established in multiple on-site activities and training in Japan, scenario for sustainable business was created with consensus among stakeholders.

Specifically, short-term projects that can be implemented within the survey period, as well as mid-term roadmap, is discussed with TRANSERCO. "Improvement of daily work" and "development of driving skill and efficiency" were identified as the pilot projects and carried out in the survey.

2.3 Implementation of Preceding and Trial Transfer and Instruction of Know-how

In parallel with creation of improvement plan and consensus-building, the survey team conducted a trial project on management improvement and on-site instruction, utilizing know-how of Michinori Holdings. After training in Japan in May 2019, following two (2) pilot projects were implemented with BRT XN, a subsidiary company of TRANSERCO in which quick implementation was expected due to managers' strong leadership.

1: alcohol check

2: Face-to Face Discussion

On 28 August 2019, a wrap-up meeting was held at XN BRT, a subsidiary of TRANSERCO, to verify effectiveness of the pilot projects, including roll call before driving, vehicle inspection, and alcohol detection system. The director of BRT praised the outcome of the pilot project noting that the greatest achievement was the risen awareness among all staff members in the company, including drivers of five normal bus services, conductors and clerks, as well as drivers of target BRT services. The effectiveness of know-how of Michinori Holdings on business improvement have been demonstrated.

3. Achievement of the Survey (Business)

3.1 Formulation of Modernization Plan of Hanoi Transport Network

Building on the result of this survey, Michinori Holdings will implement its bus service improvement program, in which modernization and improvement in the transport network in Hanoi will be set as a final goal. To achieve this, improvement in the entire transport network in Hanoi is key for success in the survey. Proposed by the Director of HDOT, who deeply understood this issue, a seminar on public transport in Hanoi, through introducing and sharing experiences in public transport in Japan, was held on 10 July 2019, after a series of discussions with DOT, TRAMOC and TRANSERCO. The attendees included an official from Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan, of which the representatives gave the presentations titled “Approach to Promotion of Use of Public Transport” and “Infrastructure Construction for Promotion of Use of Public Transport”. This opportunity built a basic G to G cooperation relationship toward improvement in public transport in Hanoi.

The seminar was attended by approximately 100 persons and media, and was broadcast by 18 local newspapers and 2 TV stations. It was a notable achievement that cooperation between Vietnam and Japan in development of public transport in Hanoi was widely known in whole Vietnam.



Figure 3.1-1 Local press reports about the seminar

3.2 Verification of Improvement by the Support of Michinori Holdings

In the survey, business improvement and on-site instruction, utilizing know-how of proposing company, was implemented as pilot projects. As mentioned before, awareness of all of the staff members, including not only drivers of target bus services but also drivers of other bus services, conductors and clerks, have been enhanced. The effectiveness of know-how of Michinori Holdings on business improvement have been demonstrated.

The pilot project for alcohol check went public by the article of Tien Phong, one of the biggest and the most familiar news company in Vietnam.



Figure 3.2-1 Vietnamese press reports about the pilot project on alcohol check

3.3 Spillover Effect over the Other Japanese Companies

This survey generated spillover effects by involving the other Japanese companies that are seeking in Vietnam a chance of business expansion in the field related to the proposing company, such as Tokai Denshi Inc., which cooperated in the pilot project for alcohol check, and YAZAKI Corporation, which installed digital tachographs in the buses of TRANSERCO. It was a significant achievement to build partnerships among Japanese companies intending to develop their business in Vietnam.

4. Business Expansion Plan after the Survey

Michinori Holdings has accumulated know-how on improvement in management and operation, and support for growth of bus business in Japan. Built on this experience, the one of the indicative business models is improving profitability of bus business in Hanoi, in exchange for a part of the profit gained by the business improvement.

Other than above, the Michinori Holdings seeks a broad-range, long-term business expansion. Indicative measures includes inviting Vietnamese tourists through tourism business operated by TRANSERCO, while sending outbound tourists from Japan to Vietnam. Both parties have already launched cooperation in preparation for the training program for the mechanics of TRANSERCO in the group companies of Michinori Holdings in Japan. .

Besides TRANSERCO, the business partner for Michinori Holdings, supports and cooperation from HPC and HDOT, both of which manage and supervise TRANSERCO, are also essential for the business expansion. Hence, Michinori Holdings seeks continuous cooperation with either of those stakeholders.

For success of the project, the challenges in improvement of transport network and data collection required for evaluation of bus routes should be overcome. Challenges for business expansion and indicative approach to solutions are as follows;

(1) Challenge 1: Improvement in Traffic Network in Hanoi

Although it is said that travel speed of buses in the city area decreased by 20% hitting the average speed of 13 to 13.5 km/h, which is as slow as bicycles. Although the buses are extremely crowded during rush hours, traffic congestion is so serious that the company cannot add any more bus fleet. Mr. Nhat, Deputy General Director of TRANSERCO pointed out challenges met in a certain route where despite its designated capacity for 10 return trips only 3 return services could actually be possible, and that the number of bus services cannot be increased due to severe traffic congestion.

Because bus services cannot be increased considering the traffic condition in Hanoi, bus business may suffer from bad influence such as difficulty in collecting cost invested in vehicles. Since the congestion problems cannot be solved only by bus operators, this issue should be addressed by a comprehensive traffic policy in Hanoi as a whole.

(2) Challenge 2: Data Collection and Analysis

The existing paper ticket system allows collection of data on approximate ridership, however, more detailed information including boarding / alighting data by bus stops or by time is not available until the IC card system is installed in all the buses. Moreover, counting survey by investigators may not be accurate, since there is no thorough rules on getting on / off buses, and buses are fully crowded in rush hours. Therefore, TRANSERCO has no way to evaluate and analyze the quantitative data.

In the period of third on-site activities, ridership data of BRT services was collected and evaluated, and the result was shown to TRANSERCO. At the same time, the way to analyze and rearrange public transport network was introduced. Although a pilot project on bus route assessment was planned to be implemented, it was not realized due to insufficient data.

(3) Approach to the Solution

Solving traffic congestion requires both traffic policy and improvement of bus business. Continuous approach to HDOT and TRAMOC is necessary for improving traffic policy.

Regarding data collection and analysis on bus use, during the survey digital tachographs for better driving skills were installed in three buses as a trial under collaboration with YAZAKI Corporation. Simultaneously, how to deal with and utilize collected data was instructed to TRANSERCO. These activities are will be continued after the survey with expectations to enhance the ability to collect data.