

Evaluation Summary

1. Outline of the Project		
Country: Socialist Republic of Vietnam		Project title: The technical assistance project to strengthen the capacity of regulator and to establish operation & maintenance company of metropolitan railway lines in Hanoi city
Sector: Transportation		Cooperation scheme: Technical Cooperation
Division in charge: Transportation and ICT Group, Infrastructure and Peace Building Department		Total cost (at the time of evaluation): 320 million yen
Period of cooperation	(R/D): February 2013 – February 2015 (Extension): March 2013 – February 2016	Partner country’s implementing organization: Hanoi Metro One-member Limited Liability Company (HMC), Hanoi Department of Transportation (DOT), Hanoi Metropolitan Railway Management Board (MRB)
		Supporting organization in Japan: Tokyo Metro co., Ltd., Japan International consultants for Transportation co., Ltd.
		Related cooperation: Study for special assistance for project implementation of the construction of Line 2 (JICA), Urban railway transport administration advisor (Ministry of land, Infrastructure, Transport and Tourism)
1-1 Background of the Project In Hanoi, the capital of Vietnam, the volume of road traffic has been increasing rapidly in recent years as the population increases. Problems such as increased traffic congestion, lowered traffic safety, and air pollution interfere with urban activities. In the future, the traffic problems will become increasingly serious; therefore, it is necessary to establish an urban railway system for the sustainable development of the City. Under the situation, JICA conducted a comprehensive urban development program in Hanoi capital city of the Socialist Republic of Vietnam (ended in March 2007). As a result of the study, a master plan was prepared on the transportation and traffic sector targeting 2020, which includes the construction of an urban mass rapid transit system in Hanoi. Based on the master plan, the construction of urban railway lines have been implemented: Line 1 and Line 2 (I) (Nam Thang Long – Tran Hung Dao Section) by the Japanese yen loan project “Hanoi City Urban Railway Construction Project”, Line 2A with cooperation from China, and Line 3 with cooperation from France in collaboration with ADB and other organizations. The executing agencies of these		

constructions are Vietnam Railways Cooperation for line1, Hanoi People's Committee (HPC) for line 2 and 3, and the Ministry of transportation (MOT) for line 2A.

Meanwhile, Vietnam needed knowledge and experience on the establishment of an organization which operates and maintains the urban railways (O&M company). For the purpose of setting the appropriate course for the establishment and operation of O&M company, JICA conducted a study for special assistance for project implementation of the construction of urban railway Line 2 (SAPI study). The recommendations from the SAPI study have been put in practice: the Government of Vietnam placed Hanoi Metropolitan Railway Management Board (MRB) as the regulator of the urban railways.

Under the circumstances, the Government of Vietnam requested the Government of Japan to cooperate in the Technical Assistance Project to Strengthen the Capacity of Regulator and to Establish Operation & Maintenance Company of Metropolitan Railway Lines in Hanoi City (the Project), for the purpose of contributing safe and reliable operations of urban railways in Hanoi. The Project targets line 2, 2A and 3 which will be under the management of HPC. The Project has been under implementation since February 2013 and is scheduled to be completed in February 2016.

1-2 Project Overview

The objective is to commence the operation of the regulator and operator jointly by strengthening the capacity of the regulator and establishing of an O&M company, thereby contributing safe and reliable operations of urban railways in Hanoi.

(1) Overall Goal

The Operation and Maintenance (O&M) company for urban railways in Hanoi city provides safe and reliable urban mass rapid transit operation

(2) Project Purpose

The urban railway regulator (O&M management) and the O&M company begin to function jointly

(3) Outputs

Output 1: The regulator's capabilities are strengthened

Output 2: Fare setting and subsidy system is established

Output 3: Operation plan and safety control system are established

Output 4: Conditions for the transfer of Line-2A are clarified

Output 5: O&M company is registered

Output 6: Rules of function, duty for each department of the O&M company are prescribed

(4) Inputs (at the time of evaluation)

Japanese side:

Dispatch of experts	One Project Manager, two experts to the regulator and twelve experts to the O&M company
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Training in Japan	Training in Japan was conducted in August and September 2013, with the participation of seventeen counterparts (C/Ps) who were separated into two groups
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Equipment	None
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Local activity expenses 18 million yen in total by the end of the Project		
Vietnamese side:		
Allocation of counterparts Sixteen C/Ps in the O&M company		
Facilities Office space for the experts		
Expenses Personnel, facilities, research and other expenses		
2. Evaluation Team		
Members:	Team Leader: Mr. Masahiko Furuichi, Senior Advisor, JICA Cooperation Planning: Mr. Yasuaki Shoji, Deputy Director, Planning and Coordination Division, Team 2, Transportation and ICT Group, Infrastructure and Peace Building Department, JICA Evaluation Analysis: Mr. Hideyuki Takagi, Ernst&Young Sustainability Co., Ltd.	
Period:	November 23 – December 4, 2015	Type: Terminal evaluation
3. Results of Evaluation		
<p>Output 1: The regulator’s capabilities are strengthened</p> <p>Activities for output 1 have mostly been implemented as planned, and the output “strengthening the regulator’s capability” was mostly achieved once, by the establishment of the department of urban railways operation and management in the regulator organization and the preparation of a proposal on the function and authority of urban railways regulator.</p> <p>However, the urban railway regulator was changed to Hanoi Department of Transportation (DOT) by the decision of HPC in September 2015, from MRB which had acted as the C/P agency until then. Consequently, output 1 has become unachieved, affected by the change in the regulator. It has become a task for DOT to ensure that the outputs of the Project are succeeded in an appropriate manner. At the time of the terminal evaluation, DOT has been conducting study in the roles and responsibilities of urban railways regulator, while it has been taking over the project outputs including the above mentioned proposal from the current C/P, HMC,</p> <p>Output 2: Fare setting and subsidy system is established</p> <p>Activities for output 2 have been implemented in an appropriate manner, depending on the situation. As for the output “fare setting system,” it has been developed as the fares are able to be set with the proposal for fare policy. As for the output “development of subsidy system,” a methodology of financial support to the O&M company has been developed based on the existing subsidy system. Therefore, output 2 has mostly been achieved. Tasks for setting subsidy and the fares will be taken over by DOT and done as the Line-2A construction progress.</p> <p>Output 3: Operation plan and safety control system are established</p> <p>Activities for output 3 have mostly been implemented as planned. The system for operation plan and safety control was planned to be established by the regulator having guidelines for operation plan and safety control. The output “establishment of operation plan and safety control system” has mostly been achieved by the preparation of guidelines. Finalization of the guidelines will be done by DOT as a new regulator.</p>		

Output 4: Conditions for the transfer of Line-2A are clarified

Activities for output 4 were implemented as planned, and the output “clarifying conditions for the transfer of Line-2A” was achieved.

The time of transfer shall be reviewed and renewed by both the management body of the railway, HPC (receiver) and the executing agency of the construction, MOT (provider), when the time of Line-2A opening is clarified. Regarding the implementation of transfer contract, the time of transfer has not been clarified as the effect of unexpected delay in the construction. The Project continues to follow-up the actions.

Output 5: O&M company is registered

Activities for output 5 were implemented as planned, and the output “registration of O&M company” was achieved by the registration of incorporation of Hanoi Metro One-member Limited Liability Company (HMC) in June 2015.

After the establishment of the company on June 1, 2015 and has started a part of its business operation. HMC became the C/P agency of the Project in September 2015, with the nomination of executive managers and securing the necessary number of personnel (twenty seven people were hired including twelve C/Ps from MRB and fifteen from other organization and agency).

Output 6: Rules of function, duty for each department of the O&M company are prescribed

Activities for output 6 have mostly been implemented as planned. The output “the rules of function and duty for each department of the O&M company” has been prepared, by drafting those based on the organizational rules of Tokyo Metro and ensuring consistency with the common organizational rules of Vietnamese corporations. The drafts are now being finalized through the activities of work trial. Therefore, indicators for output 6 have mostly been achieved.

On the other hand, the deletion of activities for trial work resulted in insufficiency of the O&M company’s technical skills toward the opening of urban railways. HMC recognizes that practical training is necessary in the whole area of railway operations, towards the first opening in the country; therefore, it will continue the development of human resources by taking technical assistance from overseas including Japan.

The Project originally planned to transfer technical skills regarding the function and roles of the O&M company, specifically on the operation of Line-2A. However, the implementation needed to be modified as an effect of delay in the construction, and the technical transfer for most of the targeted areas was conducted at a general level. After the termination of the Project, HMC shall continue to finalize the rules, etc. as the information of Line-2A is provided.

3-2 Summary of the Evaluation Results

(1) Relevance

The Project is highly relevant.

1) Relevance to the national and sector development policy

During the time from the planning to this terminal evaluation, the ten-year socio-economic development strategy (2011-2020) enhances facilitation of urban infrastructure including transportation infrastructure in Hanoi and Ho Chi Minh City. The five-year socio-economic development plan (2011-2015) further enhances prompt development of the public transportation system as a measure for traffic congestion, which is the critical task in urban areas especially in Hanoi and Ho Chi Minh City.

2) Relevance to the sector development policy

The construction of Lines 1, 2, 2A and 3 was decided based on the plan for the development of five urban railway lines under the Hanoi city transportation planning by 2020 (prepared in 2008). The Project was planned to provide technical cooperation necessary for the development of these urban railway lines. In addition, there have been target settings for the share ratios of public transportation during the time from the planning to this terminal evaluation: 30% by 2010 under the five-year socio-economic development plan (2006-2010), 35% by 2015, and 50% by 2025 under the basic policy concerning the development of the urban system 2025.

3) Relevance to development needs

Hanoi will be the first city to operate urban railways in Vietnam; therefore, it needs the knowledge and experience to be shared for both the regulator and the operator. It also needs a working flow for appropriate inspection and verification at the transfer of Line 2A, from the viewpoint of safe railways operation in particular.

4) Relevance to Japan's ODA Policy

The basic policy of the country assistance policy for the Socialist Republic of Vietnam at the time of planning is to provide support for achieving sustainable development by strengthening international competitiveness, conquer vulnerability and create a fair society and country towards the industrialization of the country by 2020 as stated in the ten-year socio-economic development strategy (2011-2020) and the five-year socio-economic development plan (2011-2015). The Project is consistent with the "urban transport network" stated in one of the priority areas "promotion of economic growth and strengthening of international competitiveness" in this country assistance policy.

5) Appropriateness of the project approach

The development of urban railway lines (construction of 2A Line as the preceding part) and sharing the information including specifications are the preconditions and important assumptions of the Project. Therefore, its implementation has largely been affected by delay in the construction, and some activities were deleted from the plan of the Project. In this regard, the timing of starting the project is considered appropriate, as it would be late if the Project was started after the completion of the construction.

From the technical viewpoint, whereas the original plan of the Project was appropriate which

covers practical trainings, it is concluded that the project approach is relevant, of which the PDM was modified affected by the external effects. In addition, it is to be desired that assistance during the preparation phase of railway operation is included from the beginning, which enables taking actions to unexpected and specific issues that are difficult to expect, together with the C/Ps in a practical manner. Since the urban railway is the first introduced in the country, it is considered that transfer of technical skills will greatly contribute to the preparation of operation, especially during the trial operation through a certain period of time after the opening.

6) Comparative advantage of Japanese technological skill

The Project shares Japan's advanced technology and wealth of experience accumulated by taking a long-term perspective on urban railways, which takes a central role in increasing the sharing ratios of public transportation in the urban area in Japan. Therefore, it is considered meaningful that the technical assistance is provided to HPC which is introducing the first urban railways in Vietnam.

In light of the above, the Project is highly relevant to the development policy and development needs of Vietnam, as well as Japan's ODA policy. In addition, the project approach has been appropriate in terms of Japan's technological advantages regarding urban railways.

(2) Effectiveness

Effectiveness of the Project is fair.

1) Project outputs

As described in "3-1 Project Achievements," most of the outputs for "strengthening the capacity of the regulator and developing the environment for establishing an O&M company" have basically been achieved in accordance with the PDM. Regarding output 1, although it was mostly achieved once; however, as the urban railways regulator, the C/P for output 1, has been changed close to the end of the project period, it has become unachieved.

2) Achievement of the project purpose

Project Purpose: The urban railway regulator (O&M management) and the O&M company begin to function jointly

Two indicators are set for the project purpose. Under the current situation of the Project, it is necessary that the following conditions are fulfilled in achieving each indicator.

Indicator 1. "Initial work of the regulator is commenced": The urban railways regulator was changed from MRB to DOT in September 2015, and DOT is in a process to set up a new division for the regulator at the time of terminal evaluation. It is necessary that organizational setup of the regulator be completed and the transferred technical skills are succeeded by the new regulator.

Indicator 2. "The trial of management control work of the O&M company is commenced": The activities for work trial towards the opening of Line-2A were deleted. As a result, the transfer of technical skills completed by the Project was general and not as specific as that

were originally planned. At the time of the terminal evaluation, work trials have been implemented mainly on finalizing the organization rules as the information of Line-2A is provided. The implementation of “trial of management control work of the O&M company” will become possible as the specifications and details of the operation of Line-2A become clear.

In light of the above, effectiveness of the Project is fair. Outputs of the Project “strengthening the capacity of the regulator and developing the environment for establishing an O&M company” have basically been achieved. However, the achievement of the project purpose “commencement of joint function of the regulator and the O&M company” has been limited so far, as effects of the change in the regulator and the delay in the construction of Line-2A: the former was not supposed at the planning, whereas the latter was included in the preconditions and important assumptions.

In order to achieve the project purpose, as for the regulator, it is necessary that organizational setup be completed and the transferred technical skills succeeded by the new regulator. As for the O&M company, it is necessary that HMC takes its own initiative to conduct work trial as the materials of Line-2A are provided including the specifications and details of the operation.

The activities of work trial was deleted from the PDM, as it could not be expected to be completed within the project period due to the delay in the construction of line-2A, and it was not certain when a new division as the regulator is established in DOT. Assuming that the activities of work trial were not deleted, it was necessary that the project period be extended. Since these conditions will not be met in near future, the decision of deleting the activities of work trial was appropriate. In addition, the project purpose should have been modified in accordance with the situation where the regulator was transferred and the activities were changed, from the viewpoint of setting the target for the end of the Project period taking such restrictions into consideration.

(3) Efficiency

Efficiency of the Project is fair (relatively high).

Inputs into the Project have basically been made as planned by both the Japanese side and Vietnamese side for the achievement of the outputs. The project period has been extended for one year mainly due to time taken for the establishment of O&M company longer than presumed and the delay in the construction of Line 2A, which affected the progress of activities. Under the restrictions, the experts and C/Ps implement the Project flexibly for the purpose of achieving the objectives of the Project, thereby the outputs have been achieved steadily. Taking these factors into consideration, efficiency of the Project is fair, while it is relatively high in terms of the efficiency of the technical transfer.

(4) Impact

Impact of the Project is fair.

1) Achievement of the overall goal

Overall Goal: The Operation and Maintenance (O&M) company for urban railways in Hanoi city

provides safe and reliable urban mass rapid transit operation

Two indicators are set for the overall goal. It is necessary that the regulator proceeds with organizational setup and succeeds the technical skills transferred by the Project. On that basis, both C/P agencies need to take initiative in achieving the project purpose based on the general level technical skills for the train operation management transferred by the Project, and that the important assumption “start of the operation of Line-2A” is realized as well.

Indicator 1. “The company becomes acquainted with train operation and management of urban railway systems, ensuring high punctuality and infrequent service stoppages”

Indicator 2. “A comprehensive safety operation system in line with “Transport Safety Management Method” is developed”

2) Other indirect effects

The Project contributed toward the revision of the railway law scheduled in 2017, which is considered as an indirect effect of the Project. In the process of drafting the articles regarding urban railways, the outputs of the Project have been referred to. . In addition, the Project potentially requires cooperation among relevant organizations, at both municipal and national levels: in its implementation, they have been engaged in certain activities either directly or indirectly toward the urban railway as the common objective. Such involvement contributed to the development of cooperation among organizations and the capacity of the officials; which would be used for the railway operation. Currently, an administrative procedure for the establishment of an O&M company for urban railways has been in progress in Ho Chi Minh City with the support from JICA. In the future introduction of urban railways in other cities including Ho Chi Minh City, the outputs and experiences of the Project will be available as a valuable precedent.

The transfer of general level technical skills for the train operation management have been completed by the Project, and the opening of Line-2A will be in 2016 according to the public notice. However, whether the overall goal “providing safe and reliable urban mass rapid transit operation” is conditional on the regulator’s organizational setup and succeeding of technical skills transferred by the Project Further, It is necessary that the train operation system be established by the continuous efforts of both regulator and O&M company on the recommendation items. In addition, capacity development of the operation and maintenance staffs should continuously be emphasized and monitored. Indirect effects of the Project will contribute to the introduction of urban railways in other cities. Therefore, impact of the Project is fair.

In a similar manner to the project purpose, it is considered that the overall goal should have been modified in accordance with the situation where the regulator was transferred and the activities were changed, together with the modification of the project purpose.

(5) Sustainability

Sustainability of the Project is relatively low.

1) Policy and systems aspects

As described in “(1) Relevance,” policy on enhancing the development of urban transportation system will be continued.

2) Organizational aspects

Regarding the urban railways regulator, it was changed from MRB to DOT as described in “(2) Effectiveness”; therefore, future organizational aspect is uncertain at the time of the terminal evaluation. In this regard, recommendation is made on the monitoring of administrative procedures for the organizational setup through the rest of the project period.

Regarding the O&M company, HMC was established through the activities for output 5. The members of Board of Directors are the Directorate General and two Deputy Directors, and five divisions are set up including 1) project planning, 2) finance and accounting, 3) general affairs and organization, 4) train operation, and 5) facility technical. The number of HMC personnel is twenty seven so far, of which twelve C/Ps were transferred from MRB, and fifteen personnel were transferred from other organizations and agencies. HMC plans to hire additional 681 employees towards the commencement of Line-2A operation.

3) Technical aspects

Regarding the urban railways regulator, DOT does not have necessary knowledge or experience as it is the first in the country. It is the next step that DOT succeeds the technical skills transferred by the Project after its organizational setup as the regulator.

Regarding the O&M company, the transfer of technical skills made by the Project was general but not as specific as that originally planned, as the activities for work trial towards the opening of Line-2A were deleted as described in “(2) Effectiveness.” Therefore, it will continue the development of human resources by taking technical assistance from overseas including Japan, on the practical trainings which is necessary towards the commencement of Line-2A operation. Meanwhile, there are concerns about the implementation of the work trial by its own initiative after the project, as the newly established O&M company does not have sufficient experience in the operation of urban railways, the first opening in the country.

4) Financial aspects

For both the regulator and the O&M company, there is no specific issue on the financial aspect of sustainability. Originally, budget is allocated from Hanoi city to the operation of regulator. The O&M company is also allocated the city budget for the time being.

In light of the above, Sustainability of the Project is relatively low. It is necessary, for the sustainability of the project’s effects, that those issues on the organizational and technical aspects of the regulator be handled in an appropriate manner.

3-3 Factors that promoted realization of effects

1) Factors concerning to planning

The Project potentially requires cooperation among relevant organizations, at both municipal and national levels. Such involvement contributed to the development of cooperation among organizations and the capacity of the officials; which would be used for the railway operation.

2) Factors concerning to the implementation process

The Project has greatly been affected by the delay in Line-2A construction, which is classified as the preconditions of activities and important assumptions. Under the circumstances, the experts and C/Ps implement the Project flexibly for the purpose of achieving the objectives of the Project: conducting technical transfer enriched with general knowledge and technical skill, and finalizing the rules, etc. as the information of Line-2A is provided.

3-4 Factors that impeded realization of effects

1) Factors concerning to planning

As described above, implementation of the Project activities have greatly been affected by the delay in Line-2A construction, which is classified as the preconditions of activities and important assumptions. As the effects, a part of the activities were deleted from the plan of the Project.

2) Factors concerning to the implementation process

At the beginning, the C/Ps regarded the relation with the expert team as they were the project owner and the consultants. Throughout the project implementation, the experts explained the objectives of a technical assistance project that assistance is provided to develop the capacity of the C/Ps. As a result, the C/Ps have gradually changed their minds and improved to act on their own initiative.

3-5 Conclusion

The Project is highly relevant to the development policy and development needs of Vietnam, as well as Japan's ODA policy. As for the effectiveness, outputs have mostly been achieved, whereas the achievement of the project purpose has been limited so far, as the effects of the change in the regulator and deleting a part of activities due to the delay in the construction of Line-2A. While inputs into the Project have basically been made as planned for the achievement of the outputs, the project period has been extended for one year. Under the restrictions, the experts and C/Ps implement the Project flexibly for the purpose of achieving the objectives of the Project, thereby the outputs have been achieved steadily. Taking these factors into consideration, efficiency of the Project is fair, while it is relatively high in terms of the efficiency of the technical transfer. It is expected that the C/P agencies will take initiative in activities after the Project to achieve the project purpose and the overall goal as well. It is necessary for the sustainability of the project's effects that the regulator proceeds with organizational setup and succeeds the technical skills transferred by the Project.

3-6. Recommendations and Lessons Learned

(1) Recommendations

1) To ensure the transfer of the urban railway regulator function to DOT

As described in 3-2 (2) Effectiveness and (5) Sustainability, the regulator for urban railway has been changed from MRB to DOT. In order to securely achieve the Project purpose and Sustainability of the Project effects, a new division should be setup in DOT as a regulator on urban railway and necessary personnel in charge of regulator activities should be assigned under the supervision of HPC. DOT should conduct administration procedure of the organization set-up of the regulator and it will be monitored by the Japanese Experts during the Project period and JICA Vietnam after the Project completion.

On the other hand, technical skills transferred to MRB in the Project should be appropriately succeeded to DOT.

2) To secure the establishment of fare setting policy and subsidy system

DOT will succeed the Project outputs concerning the establishment of fare setting policy and subsidy system, when a new division as a regulator is setup in DOT. Since DOT will be required to function as a regulator to establish fare setting and subsidy system when the business operation plan of Line-2A is determined, DOT should complete technical transfer to the concerned personnel in charge of regulator activities from MRB.

Progress of technical transfer to the concerned personnel in charge of regulator activities in DOT should be monitored by the Japanese Experts who will be assigned to the technical assistance project for promoting smart card usage for public transportation in Hanoi, of which C/P agency is DOT.

3) To implement work trial after completion of the Project

Work trial concerning regulator (DOT) for urban railway and O&M company (HMC) were deleted from the original PDM, due to unexpected delay of the construction of Line-2A project. Consequently, both DOT and HMC are expected to take an initiative to implement the work trial for their respective activities when the preconditions are satisfied. However, Vietnamese counterparts expressed their strong requests on Japanese technical assistance for the work trial of the urban railway operation in Hanoi City so as to secure “Sustainability” of the Project, because urban railway operation is purely the first experience for the Vietnamese urban railway services. In this respect, it is recommended that JICA considers for the assistance as described in 3-7. Other business, when actual request is made by the C/Ps.

(2) Lessons Learned

1) Assistance on the system aspect at the introduction of urban railways

The Project was implemented for the introduction of a track type public transportation system as one of measures addressing traffic congestion, an accelerating issue in Hanoi city and urban environment as well. The Project successfully transferred the technical skills and experiences of urban railways in Japan, which take a central role in increasing the share ratios of public transportation in the urban area in Japan. Especially, strengthening of the regulator is important at the introduction stage, to be the basis of the system aspect which sustains safe and reliable railways operation.

Issues of transportation in connection with urbanization are the urgent challenges in many recipient

countries, and introduction of urban railways is considered. Under the circumstances, the assistance on the system aspect in this Project is a precedent in considering the issues related to urban railways regulator, including the establishment of an urban railways regulator, the functions of the regulator and the adjustment of regulators' functions between the central and the local governments. Therefore, the precedent of this Project should be reviewed and utilized by JICA as meaningful lessons at the forth coming opportunity for assisting the introduction of urban railways in other countries and/or regions.

2) Consideration on the modification of PDM

PDM of the Project was modified to change some activities before the terminal evaluation, affected by the transfer of regulator and the situation of a part of preconditions and important assumptions regarding the construction of Line-2A. However, the project purpose and the overall goal were unchanged but remained as original PDM; as a result, there emerged gaps between the outputs and the project purpose and the overall goal in terms of the logical constitution of PDM.

Therefore, it is considered that at the changing of the outputs, the project purpose and the overall goal should have also been modified from the viewpoint of setting the target for the end of the Project period and the impact which will be achieved as a result of achieving the project purpose, by taking such restrictions into consideration. In the implementation of project, it should be noted that the logical constitution of PDM should be reviewed when modification is made to a part of PDM.

Regarding the modification of the project purpose, it would be defined as "The O&M company proceeds with the necessary preparation for the commencement of Line-2A operation". The achievement would be measured by observing the development of organizational framework (securing the sufficient number of staffs, etc.), the development of system (finalization of the internal rules, etc.) and the adoption of technical skills (implementation of trial works by its own initiative, etc.). Regarding the modification of the overall goal, it would be defined as a realization of the current project purpose "The urban railway regulator and the O&M company begin to function jointly." The achievement would be measured by the appropriate setting of fares and subsidies, etc. for the regulator, and by the appropriate management of Line-2A operations and the business as a whole for the O&M company.

3-7. Other Business

The relevant agencies request continuous cooperation and support for the training of operation and maintenance staffs. JICA will take this into consideration, observing the follow-up situation of the recommendations and the changes in the conditions surrounding the urban railways as well.