**Uzbekistan**

**Railway Passenger Transport Improvement Project**

Report Date: February 2003

Field Survey: November 2002

## 1. Project Profile and Japan's ODA Loan


Project site

The passenger car repair shop constructed under the project

### 1.1 Background

Under the "division of labor" system among former Soviet Union member, Uzbekistan was assigned with the role of supply base of natural resources and agricultural products. Outbound transport routes from the former Soviet Union, such as railways, roads and airways, were established to form a network with Moscow at its center. Having emerged from this background, the transport sector of Uzbekistan, like its counterparts in other Central Asian countries, faced the issue of how to establish a transport network that could access new markets.

Since the disintegration of the Soviet Union in 1991, Uzbekistan Railway (UTY) has been operating railway lines with a total length of 3,656km covering Uzbekistan, Tajikistan and part of Kyrgyz. While freight transport volumes have been on the decrease since the specialized production system of the Soviet Union was abolished, passenger transport volumes have held steady, with railways accounting for 50% of total domestic passenger transport volume. On the other hand, with fewer passenger cars having been purchased since the 1990s because of foreign exchange shortages, the issue of aging cars was getting more serious, and it was feared that this situation would hinder the stability of the transport services. Since UTY does not have a repair shop in the country, passenger cars had been repaired in other countries such as the Ukraine, Russia or Kazakhstan. However, as a result of foreign exchange shortages and time-consuming maintenance practices, some passenger cars have inevitably been operated without being repaired. Therefore, construction of a new passenger car repair shop in the country and renewal of passenger cars were needed.

### 1.2 Objectives

The objective of the project was to make it possible to repair railway passenger cars in Uzbekistan by constructing a repair shop, to upgrade old cars by procuring necessary spare parts and purchasing new cars, thereby maintaining and increasing the passenger transport capacity of the railway.

### 1.3 Project Scope

(1) Construction of a passenger car repair shop (civil work and equipment supply)

(2) Procurement of (new) passenger cars

(3) Procurement of spare parts[1]

(4) Consulting services

The foreign currency portion of the total project cost was financed by the ODA loan and the local currency portion was funded by the executing agency.

### 1.4 Borrower/Executing Agency

Government of the Republic of Uzbekistan/Uzbekistan Railway Company (Uzbekistan Temir Yullari (UTY))

### 1.5 Outline of Loan Agreement

| | |
|---|---|
| Loan Amount<br>Loan Disbursed Amount | 6,102 million yen<br>6,097 million yen |
| Exchange of Notes<br>Loan Agreement | June 1996<br>June 1996 |
| Terms and Conditions<br>-Interest Rate<br>-Repayment Period<br>(Grace Period)<br>-Procurement | <br>2.7%<br>30 years<br>(10 years)<br>General untied |
| Final Disbursement Date | December 2001 |

## 2. Results and Evaluation

### 2.1 Relevance

According to Uzbekistan Ministry of Foreign Economic Relations, UTY and other concerned organizations, particular importance was attached to passenger transportation, which was deemed necessary as a means of transport for low-income people under the government's social development plan. To this end, it was essential to continue the passenger transport services. Because the existing passenger trains were very old, it was necessary to purchase new ones for demanded international lines and to construct a passenger car repair shop. At the time of appraisal, Uzbekistan did not have a

[1] 2 years' worth of spare parts urgently needed for the repair of passenger cars and 1 year worth of those needed after the completion of the repair shop

passenger car repair shop, nor did it have sufficient foreign currency to contract repairs to other countries, therefore they needed a passenger car repair shop within the country. Although the country had a freight car repair shop, it is generally impossible to repair passenger cars in a freight car repair shop (the reverse is possible, though). In view of the circumstances, it was relevant that this project focused on the construction of a passenger car repair shop for the purpose of maintaining the passenger transport capacity.

The current transport policy of the Uzbekistan Government is that passenger transport should be allocated to railway and road transport. Railways are expected to provide a means of transport for low-income people and also to provide convenient transport, particularly during morning and evening hours when urban and suburban roads are congested. Other donors have also provided loans to railway projects; there has been, for example, the railway modernization project by the Asian Development Bank (ADB), and the project for provision and re-powering of 12 electric locomotives and diesel-electric locomotives by European Bank for Reconstruction and Development (EBRD). These indicate that this project has been in line with the policies of other donors.

Given the current policy of the Uzbekistan Government and the assistance from other donors, the objective of this project maintains its relevance today. However, as explained below, we cannot deny that there is some concern as to the future situation in light of global trends in passenger transport. In particular, considering the social and economic turmoil in the whole region following the collapse of the Soviet Union and weakened ties with Russia, the risks of long-distance passenger transport should have been studied more seriously.

## 2.2 Efficiency

### 2.2.1 Project Scope

Construction of the passenger car repair shop, procurement of passenger cars and purchase of spare parts were implemented as planned. The number of man months (MM) for consulting services was increased to 107.3 MM from the planned 103 MM. The factors behind this increase are as follows: at the implementation stage, the planned location of the repair shop had to be changed, and the consultant conducted an additional survey at the suggestion of JBIC; also, a survey on the operations and maintenance system of the repair shop was added. As it turned out, these additional surveys helped enhance the sustainability of the executing agency with respect to the operations of the repair shop.

### 2.2.2 Implementation Schedule

The implementation of the whole project was delayed by 11 months. The construction of the passenger car repair shop, procurement of passenger cars and spare parts started 11 months behind schedule respectively. The delay in the construction was attributable to the change of the construction site, which resulted in additional time for examination. The bidding for procurement of

passenger cars and spare parts started later than the schedule, because of a hold-up in the paperwork for budget approval by the Uzbekistan government. Procurement of spare parts was completed almost as scheduled, though it was delayed slightly due to stock shortages at the supplier[2].

The consulting services were also delayed by 11 months due to the above-mentioned additional survey on the operations and maintenance system of the repair shop.

### 2.2.3 Project Cost

In spite of the increase in the procurement cost of equipment required for the construction and additional procurement of utility-related equipment, there was little change in the amount of the foreign currency portion financed by the ODA loan, because local funds covered part of the construction of the repair shop, installation of equipment and commissioning .

## 2.3 Effectiveness

### 2.3.1 Operation Results

Table 1 shows the target and actual number of the repaired passenger cars. The repair shop started full operations in March 2001 and the actual number of repaired cars are 49%, 82% and 84% of the target for each year during 2000 - 2002. According to related personnel, repairs are currently undertaken with the aim of achieving the target and the number of repaired cars is on the increase. In addition, other types of repair such as TO3 and DEPOT, which were not contemplated at the planning stage, and trial repairs of streetcars, are also conducted.

Table 1 Number of Passenger Cars Repaired at the Repair Shop[1)]

(unit: cars/year)

| Type of Repair | Repair Criteria | Maximum Capacity | 2000 | | 2001 | | 2002 | |
|---|---|---|---|---|---|---|---|---|
| | | | Plan | Actual | Plan | Actual | Plan | Actual |
| **KR-1** | Repair of electric system conducted every 4-5 years | 398 | 187(35) | 120(0) | 255(47) | 251(0) | 259(48) | 252(0) |
| **KR-2** | Overhaul conducted every 20 years | 128 | 68(13) | 5(0) | 91(17) | 34(0) | 93(17) | 47(0) |
| **Subtotal** | | 526 | 255(48) | 89(0) | 346(64) | 285(0) | 352(65) | 299(0) |
| **TO3** | Periodic inspection after 150,000km of operation (or within 6 months) | - | - | 876 | - | 689 | - | 579 |
| **DEPOT** | Repair after 300,000km of operation (or within 2 years) | - | - | 68 | - | 105 | - | 163 |
| **Subtotal** | | - | - | 944 | - | 794 | - | 742 |
| **Total** | | - | 255 | 1,069 | 346 | 1,079 | 352 | 1,041 |

Source: Passenger car repair shop

1) Figures in brackets ( ) are the number of repairs contracted by neighboring counties.

Table 2 shows the gross income of the passenger car repair shop. Although the income from repairs KR-1 and Kp-2 only did not reach the target, the total income was boosted by DEPOT repair.

[2] An additional order to spend the surplus contingency . Russian-made spare parts were delivered by a Hungarian

This suggests that repairs other than KR-1 and KR-2 have a positive impact on the total income. TO3, which accounts for the largest number of repairs, as shown in Table 1, makes a relatively small contribution to the total income because of the low repair fee of US$ 494.

Table 2 Income from Repairs at Passenger Car Repair Shop

(unit: USD)

| Type of Repair | Repair Fe | 2000 | | 2001 | | 2002 | |
|---|---|---|---|---|---|---|---|
| | | Plan | Actual | Plan | Actual | Plan | Actual (note |
| **KR-1** | 13,584 | 2,540,208 | 1,630,080 | 3,463,920 | 3,409,584 | 3,518,256 | 3,423,168 |
| **KR-2** | 17,434 | 1,185,512 | 87,170 | 1,586,494 | 592,756 | 1,621,362 | 819,398 |
| **Subtotal** | - | 3,725,720 | 1,717,250 | 5,050,414 | 4,002,340 | 5,139,618 | 4,242,566 |
| **TO3** | 494 | - | 432,744 | - | 340,366 | - | 286,026 |
| **DEPOT** | 10,188 | - | 692,784 | - | 1,069,740 | - | 1,660,644 |
| **Subtotal** | - | - | 1,125,528 | - | 1,410,106 | - | 1,946,670 |
| **Total** | - | 3,725,720 | 2,842,778 | 5,050,414 | 5,412,446 | 5,139,618 | 6,189,236 |

Source: The passenger car repair shop

As shown in Table 1 and Table 2, both the number of repaired passenger trains and the income from repairs are below the target. The forecast of demand for repairs made at the planning stage was inaccurate, i.e. repair orders from neighboring countries were expected from immediately after the start of operation, and the types of repair to be covered by the project were limited to KR-1 and KR-2 only. In 2002, the passenger car repair shop made projections for demand until 2006 as presented in Table 3, and the figures were revised downward.

Although a huge gap between the estimated and actual income did not occur thanks to DEPOT repairs, etc., the study on demand at the planning stage is considered inadequate. Even if it is taken into account that it was difficult to predict the coming broad changes in the decades after the collapse of the Soviet Union, the projection based on only two types of repair (KR-1 and KR-2), that were designated during the Soviet era, can be deemed to have been lacking in foresight.

Table 3: Projection of the Number of Cars to be Repaired at the Passenger Repair Shop[1)]

(unit: passenger cars)

| Type of Repair | 2003 | | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|---|---|
| | Target | Projection by the shop | Target | Projection by the shop | Target | Projection by the shop | Target | Projection by the shop |
| KR-1 | 264(49) | 122(15) | 268(49) | 131(15) | 273(50) | 134(20) | 278(51) | 143(25) |
| KR-2 | 94(17) | 30(10) | 97(17) | 30(15) | 98(18) | 30(20) | 100(18) | 32(25) |
| Subtotal | 358(66) | 150(25) | 365(66) | 161(30) | 371(68) | 164(40) | 378(69) | 175(50) |
| TO3 | - | - | - | - | - | - | - | - |
| DEPOT | - | 118 | - | 120 | - | 120 | - | 125 |
| Overhaul | - | 5 | - | 10 | - | 15 | - | 20 |
| Manufacturing of passenger cars | - | 2 | - | 10 | - | 10 | - | 10 |
| Repair of streetcars | - | 8 | - | 8 | - | 8 | - | 8 |
| Subtotal | - | 141 | - | 148 | - | 153 | - | 163 |
| Total | 358 | 293 | 365 | 309 | 371 | 317 | 378 | 338 |

Source: The passenger car repair shop

1) Figures in brackets ( ) are the number of repairs contracted by neighboring counties.

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supplier nominated by the executing agency.

### 2.3.2 Saving and Earning of Foreign Currency

As shown in Table 4, the saving of foreign currency required for the repair of passenger cars, which was regarded as a benefit in the calculation of EIRR at appraisal, sharply increased from 2001 when the repair shop was completed to 2002. In addition, new passenger cars have been manufactured at the repair shop using Russian- and domestic-made parts since 2002. Thus, a structure under which foreign currency is saved by manufacturing passenger cars instead of purchasing them from abroad is being established.

At the planning stage, the foreign currency saving effect and the time saving effect of shortened repair periods were expected as benefits. The repair periods for KR-1 and KR-2 were estimated at 12 days and 20 days respectively, 2 days and 5 days shorter than those of repairs contracted abroad. However, KR-1 actually takes 30 days and KR-2 takes 50 days. No foreign currency savings effect from the shortened repair time has been generated so far. As for repairs contracted by neighboring countries, the repair shop currently has a repair order of 10 cars placed by Tajikistan, which is suspended because of Tajikistan's financial difficulties. They expect the number of cars to be repaired will increase to 50 per year by 2006. However, as earning of foreign currency is affected by economic conditions in other countries, a stable increase cannot be expected. Foreign currency earning should have been studied more carefully at the planning stage.

Table 4: Saving of Foreign Currency

(unit:USD)

| | Repair Fee (USD/car)[1)] | | | Saved Foreign Currency | | |
|---|---|---|---|---|---|---|
| | Foreign repair | Domestic repair | Difference | 2000 | 2001 | 2002 |
| **KR-1** | 18,800 | 13,584 | 5,216 | 625,920 | 1,309,216 | 1,314,432 |
| **KR-2** | 36,000 | 17,434 | 18,566 | 92,830 | 631,244 | 872,602 |
| **Total** | - | - | - | 718,750 | 1,940,460 | 2,187,034 |

Source: JBIC, passenger car repair shop

1) The repair fee for foreign repairs is as planned in 1996, and that for domestic repair is as of 2002.

### 2.3.3 Recalculation of EIRR

Since various types of repairs of passenger cars are conducted in addition to those initially planned, the EIRR calculation assuming saving and earning of foreign currency by the repairs KR-1 and KR-2 as the only benefit does not reflect the actual situation. Based on this recognition, EIRR was recalculated using the income of the repair shop based on each repair fee, the actual number of repaired cars and the projection by the repair shop of the number of cars to be repaired. This calculation resulted in an EIRR of 7%, below the originally estimated 13%. This difference can be attributable to the gap between the planned and actual number of repaired passenger cars, an optimistic projection of the number of repair orders by neighboring countries, and an underestimated O&M cost. At the planning stage, the O&M cost of KR-1 and KR-2 was taken into account, while for recalculation the average ratio of the actual O&M cost against the total income for repairs during the 2001-2002 (60%) was used, as repairs other than KR-1 and KR-2 were also conducted. Foreign currency saving by the reduction of repair time was not included in the recalculation because no such

saving had been realized. Also, foreign currency saving resulting from the construction of passenger cars, which started in 2002, was not considered here because the necessary data was not available.

### 2.3.4 Effect of Training

The overseas training on specifications and maintenance of introduced equipment and materials was conducted in Germany. At first, shop floor workers were to be included among trainees. However, at the request of the repair shop, senior staff of each department participated in the training program with a view to promoting technical transfer within the shop after they came back. Among 15 employees who received training (10 clerical and operational staff and 5 engineering staff), 12 are working at the repair shop and 3 were assigned to other departments of UTY.

The following are the interview responses from trainees concerning how they evaluated the training program and what they learned.

(1) Trainees were divided into 3 groups according to their specialized fields, and the training consisted of lectures, practical training, and tours of inspection. Time allocation to each component varied by field of specialty.
(2) The training manual was written in Russian and the lectures were given in German with translations. This appeared to cause no problems. Lecturers were engineers, university teachers, etc.
(3) The contents of the training were flexibly changed in response to the trainee's requests and were satisfactory.
(4) I make use of the skills I learned in giving training to my subordinates.

The effects of the training are realized in daily instructions to subordinates and technical transfers in the in-house training that is given to all employees and conducted in the repair shop throughout the year. This in-house training is provided 4 times a month (90 minutes per session), and responsible staff at the repair shop, including those who completed the overseas training as well as outside specialists, give lectures. Most of the participants of the overseas training were not engineers but senior level clerical or operational staff. If the training had targeted technical staff, it might have been more effective in promoting efficient technical transfers. More foresight should have applied to the selection of trainees.

### 2.3.5 Operation of Newly Purchased Passenger Cars

In the project, 25 passenger cars were purchased to replace obsolete ones. Purchased cars are compartment sleeping cars. These cars are operated by a passenger transport company. Ten cars or so are used for the 15-car train bound for Moscow, and others are used for tourist charter trains or trains for state visitors. 22-24 out of 25 cars are always in operation while one car is under maintenance at the repair shop. New passenger cars were operated 214 days in 2001 and 286 days in 2002 (10 months).

Contribution of these new cars to the maintenance of the passenger transport capacity is evident

from the number of days they are operated as mentioned above, although trains bound for Russia, which had been planned for daily operation, are now operated only on 112 days a year in light of the international situation and economic conditions (as stated in detail in 2.3.6). Even so, the new passenger cars are deemed to be operating at high frequency not only on the Russia line but also on other lines.

### 2.3.6 Passenger Transport Capacity

As shown in Table 5, the passenger transport volume has yet to recover to the level of 1998 after the decline in 1999, although it was on the increase in 2000 and 2001. Transport volumes and the number of passenger trains operated are decreasing for international routes in particular. Behind this situation are the following factors:

(1) Decrease in trains mainly bound for Russia via Kazakhstan

The demand for passenger transport declined due to the following reasons: the 1998 currency crisis in Russia; the political distance between Uzbekistan and Russia as shown in their stances after the 9-11-2001 attack on the United States; swindling of passengers by Kazakhstan customs officials since 1999; limitations on entry into Russia due to immigrant control measures by the Russian government; stepped-up security against acts of terrorism; complicated customs procedures; the insecure situation in Russia (train bombing, etc.) and other factors. As a result, the number of trains is decreasing.

(2) Time-consuming customs procedures

At present, measures are being attempted to reduce the time required for customs procedures from the present 4 hours to about 2 hours by introducing baggage cars which can be locked. Passengers have to clear customs four times before they arrive in Russia. These procedures cause inconvenience and trouble to users of the passenger transport system.

(3) Economic conditions across the whole region

Deterioration of foreign investment in Uzbekistan, where an open economic policy is progressing under a dual currency system, has led to the decrease in the number of users of the railways for private business (sales of goods).

Table 5 Changes in the Number of Passengers

(unit: thousand persons)

| | | 1998 | 1999 | 2000 | 2001 | 2002 [1)] |
|---|---|---|---|---|---|---|
| ▪Passengers traveling within the country | | | | | | |
| | Long-distance | 679.9 | 582.4 | 551.0 | 521.0 | N/A |
| | Short-distance | 12,777.6 | 11,782.1 | 13,007.0 | 13,897.0 | N/A |
| Subtotal | | 13,457.5 | 12,364.5 | 13,558.0 | 14,418.0 | 10,530 |
| ▪Passengers traveling across borders | | | | | | |
| | Exit | 1,744.9 | 989.0 | 1,017.0 | 585.0 | N/A |
| | Entry | 1,342.3 | 721.7 | 824.0 | 423.0 | N/A |
| | Transit | 850.7 | 686.0 | 886.0 | 654.0 | N/A |
| Subtotal | | 3,937.9 | 2,396.7 | 2,727.0 | 1,662.0 | 719 |
| ▪Total | | 17,395.4 | 14,761.2 | 16,285.0 | 16,080.0 | 11,249 |

Source: Prepared based on data from the passenger transport company

1) The number for the period from January to September

With respect to domestic passenger transport, long-distance passengers are decreasing while short-distance passengers are increasing. According to the data for January to September 2002 obtained from the passenger transport company, the total number of passengers was 11,249,000, increased by 147,600 (1.2%) from the same period in 2001. Among them, those who traveled on short-distance trains increased by 285,200. The number of passengers per one car on short-distance trains increased from 94.5 in 2001 to 98.6 in 2002. On the other hand, passengers traveling across borders and long-distance passengers are on the decline, mainly due to the stoppage of operations of 15 international trains and 60 domestic trains.

Because of above problems particularly in international passenger transport, the effect of maintaining passenger transport volumes, which is the objective of the project, has not been clearly demonstrated. If the project had not been implemented, the number of passenger trains in operation would inevitably have decreased sharply, because of difficulty in securing necessary foreign currency to commission the repairs to other countries. As mentioned in “2.1 Relevance”, railway passenger transport was promoted as an important means of transport for low-income people under a national policy. If the number of passenger trains had been reduced, a negative impact on the socio-economic situation would have been inevitable. Nevertheless, the study at the planning stage was insufficient in some respects, and failed to foresee the possible effects on repair demand of economic changes across the whole region.

## 2.4 Impact

### 2.4.1 Social Impact

Under the Uzbekistan government transportation policy, railway passenger transport, which can carry larger numbers of passengers at lower fares than road or air transport, is expected to expand as a means of transport for low-income people. Therefore, the upper limits on railway fares are set by the government. The government policy is to have railway, road and air transport contribute to the

development of the transport sector by playing the parts allocated to them. The government does not regard them as competing with each other.

In the tourism sector, road transport such as bus services still play the central role. However, there is a great demand for a tourist train operation plan on the route connecting internationally known tourist spots such as Samarkand and Bukhara, as well as demand for railway passenger transport to the domestic tourism bases (in mountainous resort areas). It is possible that the improvement of passenger cars and railway services will help promote the use of railways in this context. In future, discussion will be necessary as to how to secure means of transport between railway stations and tourisms bases that are far apart from each other. UZBEKITOURISM, a government agency, is not active in promoting tourism development and securing means of transport for tourists, nor does it cooperate with the passenger transport company. On the passenger transport company's side, the company has recognized the inefficiency of the current structure and set up a tourist department. Although the social impact of the project cannot be proved quantitatively, the following are considered to be the social impacts of the project: a sharp decline in passenger transport volumes was avoided by operating the passenger car repair shop and a variety of means of transport were ensured within the transport sector to enable users to select one according to their needs; and the purchase of new passenger cars contributed to the improvement of railway transport services.

### 2.4 Environmental Impact

No specific report on environmental problems has been made by the executing agency. Since the construction site had already been acquired by the time of appraisal, neither land acquisition nor relocation of residents was necessary, posing no problems.

### 2.5 Sustainability

The passenger car repair shop constructed in the project is operated by the passenger car repair shop company, a subsidiary of UTY. The company turned into a self-financing entity in September 2002. In order to maintain the sustainability of the repair shop, it is necessary for it to continue repairing passenger cars from both Uzbekistan and the neighboring counties, and to maintain a balance between the income from repairs and the maintenance costs. Since the criteria are set for the frequency of periodic repairs of each type, the demand for repairs will always exist as long as the railway carries passengers. However, if the decline in the passenger transport volumes is not arrested, the number of cars repaired at the shop may decrease. The only plan the repair shop has is a short-term plan for the period till 2006 referred to in 2.3.1, and no future plan has been made from a long-term perspective. With respect to the organization and operations, measures are being taken based on the O&M recommendation survey conducted by JBIC in 2001. However, the company's financial system has yet to be established. They do have a department in charge of financial affairs, but no systematic accounting system is in place and related materials are not organized sufficiently.

New passenger cars purchased under the project are operated by the passenger transport company, which currently operates at a loss due to a decrease in trains operated caused by the decline in passenger transport and the lack of flexibility in fare setting, etc. Under the circumstances, it is difficult for this company, which is currently under the financial support of UTY, to sustain itself as an independent company.

The present status of the passenger car repair shop and the passenger transport company in terms of the organizational structure of business operations, system for operations and maintenance, personnel, technical capability and financial status are summarized below.

### 2.5.1 Organizational Structure of Business Operation

The executing agency is UTY, a 100% state-owned company which has a number of railway related companies under its control. UTY consists of 164 departments at which a total of 54,560 employees are working (as of 2000). The passenger car repair shop and the passenger transport company are independent companies of which 100% stocks are held by UTY.

### 2.5.2 Operations and Maintenance

The passenger car repair shop takes repair orders mainly from the passenger transport company. This passenger car repair shop, which has been operating since before the project, is under organizational reform including the increase of employees in line with the expansion of business scale. In 2001, the repair shop carried out following measures based on the result of the above-mentioned O&M recommendation survey .

(1) Integrating all the departments involved in the activity planning of the repair shop.
(2) Implementing quality control, environmental measures, and measures to protect the working environment according to the national standards.
(3) As for the TO3 repair period, the former Russian standard is applied under the agreement with railway companies in neighboring countries. The recommended extension of the repair period is impossible because the repair shop company and the Uzbekistan Government do not have discretion to determine their own repair period.
(4) A monthly accounting management system has already been introduced in which the accounting division prepares monthly accounting reports based on the records of the finance department and submits it to the management.
(5) Recommended establishment of a new committee on the shop operations is not considered necessary because it has been concluded that the existing organization functions well enough.

The passenger transport company operates railway passenger transport on domestic and international lines. The company has obligations to have passenger cars repaired periodically and has already completed the repair of passenger cars operated on international lines. However, passenger cars of suburban trains have yet to be repaired, and requests for their repair were being made to the repair shop. Repair fees incurred so far were borne by UTY. Affected by the decrease in passenger

transport in recent years, the number of trains in operation has been reduced and the passenger transport fares are controlled at a low level by government policy. The roundtrip fare to Moscow was decreased from US$200 to US$120 in an effort to attract users (the corresponding airfare is US$450). In order to ensure sustainability of the passenger transport company, more passenger trains need to be operated. However, given the low profitability of domestic and suburban lines, profit increases cannot be expected. On the company's side, they think that, since passenger transport plays an important role in social development, cities that benefit from passenger transport should share the cost, as was practiced in the era of the Soviet Union.

### 2.5.3 Personnel and Technical Capability

The number of employees of the passenger car repair shop has changed as shown in Table 6. The number has been increasing after the construction of new facilities under the project. According to the repair shop, 2,000 employees are needed to deal with the maximum operation capacity. However, the upper limit is set at 1,400 at present from the viewpoint of profit.

During the nine months from January to September 2002, 186 persons, most of whom were technical workers, were newly employed. On the other hand, 123 employees left their jobs, including 62 persons dismissed for violation of rules for employees. The increase in employees was necessary due to the separation of the interior repair shop and for the purpose of reinforcing public relations staff. Newly employed workers receive training and are assigned duties suitable for their skills and aptitude. The company makes it a policy to have employees perform the same duties as long as possible in order to enhance their technical capability.

Table 6: Number of Employees of Passenger Car Repair Shop by Type of Job

(unit: person)

| Type of Job | 2000 | 2001 | 2002 |
|---|---|---|---|
| **Clerical and administrative** | 25 | 40 | 50 |
| **Technical** | 645 | 710 | 1,130 |
| **Total** | 670 | 750 | 1,180 |

Source: The passenger car repair shop

The repair shop provides training to employees throughout the year. The in-house training sessions for all employees are conducted 4 times a month (90 minutes per session), and involve lectures by responsible staff of the repair shop or outside specialists. Other training programs provided in 2002 are shown in Table 7. In total, 50 employees received training and 311 employees obtained qualifications.

Table 7: Employees Who Received Training and Obtained Qualifications in 2002

| Contents of Training and Qualification | Number of Employees |
|---|---|
| Training at a technical school (off duty) | 4 |
| Training on woodwork equipment maintenance (on duty) | 12 |
| Training on painting techniques (on duty) | 10 |
| Training on special techniques for gas welders (off duty) | 9 |
| Training on operation of the freight car lift for electrical and mechanic workers | 15 |
| Subtotal | 50 |
| Received training and obtained qualifications on the operation of new floor cleaning equipment | 6 |
| Passed electrical engineer test and won promotion | 19 |
| Obtained qualification to handle gas equipment | 21 |
| Obtained advanced qualification in welding techniques, obtained qualification to use gas equipment | 82 |
| Obtained qualification to use electrical mobile equipment | 89 |
| Obtained qualification to operate lifting equipment | 51 |
| Obtained qualification in welding techniques | 43 |
| Subtotal | 311 |
| Total | 361 |

Source: Passenger repair shop

The passenger transport company had 4,292 employees as of October 2002, 117 less than the previous year as a result of personnel reduction aimed at cost reduction. 195 employees received training on emergency medical care and many employees attended seminars concerning the legal system or insurance. Also, as a measure to improve customer services, 26 selected female employees are working as train service staff. In operating trains, the company attaches particular importance to the safety of passenger transport. As part of its efforts in this regard, the operation system is being updated in order to reduce the number of emergency stops, which cause the delay of trains.

### 2.5.4 Financial Status

The passenger repair shop has been financially independent since September 2002 without any payment obligation to UTY. The loan funded to construct facilities under the project will be repaid by UTY and the repair shop is exempt from repayment obligations. These exemptions are special measures by the government aimed at facilitating privatization of public corporations. The main revenue source of the repair shop is the income from repair of passenger cars ordered by the passenger transport company, etc.

The passenger car repair shop provided its financial records only for the period after its operations under the project began. We could not obtain any data showing detailed financial information due to an inadequate financial recording system, and the data on the fixed assets and current assets is not credible enough. However, as far as the information goes, based on the total income and expenditure for 2001 and the January-September period in 2001 shown in Table 8, the shop made a profit in both years and achieved about four times more profit during nine months in 2002 than was achieved in 2001. Also, according to the balance sheet presented as Table 9, the capital ratios as of the end of 2000 and 2001 were 64% and 54% respectively, indicating that the present financial status is favorable.

The repair shop has explained that organizational reform of the accounting system is being carried out. It is important to establish an accounting system as quickly as possible in order to ensure the sustainability of the repair shop.

Table 8: Profit and Loss Statement of Passenger Car Repair Shop

(unit: thousand SUM)

| | | 2001 | 2002 (Jan.-Sep.) |
|---|---|---|---|
| ■Income | | | |
| | Income from repairs | 1,930,962 | 3,186,112 |
| | Interest, etc. | - | 2,719 |
| | Others | - | 117,128 |
| Total | | 1,930,962 | 3,305,959 |
| ■Expenditure | | | |
| | Repair expenses | 1,823,428 | 2,486,513 |
| | Office expenses | - | 110,712 |
| | Others | - | 286,206 |
| Total | | 1,823,428 | 2,883,431 |
| ■Profit before tax | | 107,544 | 422,528 |

Source: The passenger car repair shop

Table 9 Balance Sheet of Passenger Car Repair Shop

(unit: thousand SUM)

| | | 2000 | 2001 |
|---|---|---|---|
| ■Assets | | | |
| | Current assets | 932,615 | 3,258,836 |
| | Credit | 365,159 | 911,927 |
| | Investments, etc. | 12,815 | 174,846 |
| | Fixed assets | 10,400,423 | 10,554,253 |
| Total | | 11,711,012 | 14,899,862 |
| ■Liabilities and Stockholder's Equity | | | |
| | Current liabilities | 422,210 | 409,728 |
| | Long-term debts, etc. | 3,707,745 | 6,528,353 |
| | Capital stock | 7,482,961 | 7,482,961 |
| | Internal reserve | 98,096 | 478,820 |
| Total | | 11,711,012 | 14,899,862 |

Source: The passenger car repair shop

Detailed financial data for the passenger transport company is not available. According to Table 10, the company's profit and loss accounts for the 9-month period in 2001 and 2002 were both in deficit and the company has been falling farther into the red. Among the main causes of deficit are increases in employee salaries, facility improvement costs, and passenger car repair costs. As a consequence of this situation, UTY pays the passenger car repair costs in full. Thus, it is difficult to ensure the sustainability of the passenger transport company under the present circumstances. Some say, however, that financial support by UTY is justifiable considering that the transport company is not given the discretion to determine transport fares.

Table 10: Profit and Loss Statement of Passenger Transport Company

(unit: SUM)

| | | 2001 (Jan.-Sep.) | 2002 (Jan/-Sep.) |
|---|---|---|---|
| ■Income | | | |
| | Fare income | 5,725,300 | 8,367,500 |
| | Others | 1,019,000 | 2,236,100 |
| | | 6,745,200 | 10,603,600 |
| ■Expenditure | | | |
| | Passenger transport costs | 4,412,300 | 6,633,500 |
| | Others (including passenger car repair costs) | 4,311,800 | 7,870,100 |
| Total | | 8,724,100 | 14,503,600 |
| ■Profit before tax | | - 1,978,900 | - 3,900,000 |

Source: The passenger transport company

### 2.5.5 Future Plans

The passenger car repair shop made a business plan for 2002-2006 at the beginning of 2002, which consists of the objectives of the shop operations, projections of the number of orders for each type of repair, financial forecasts, and employment projections.

Negotiations with passenger transport companies in neighboring countries to accept repair orders are also planned with the view to expanding the market for passenger car repair. Other plans include a side business plan to produce wooden furniture by making the equipment in the repair shop available to local companies.

However, this is a short-term business plan for the period till 2006. Medium- and long-term future plans are necessary. In the projection of the number of orders for each type of repair, increases in repair orders from neighboring countries are projected. However, the fact is that these orders have not carried out due to shortage of funds in the ordering countries, in spite of the existing demand for repairs, so the projections do not reflect reality. Further, manufacturing of new passenger cars should be decided taking into consideration the downward trends in passenger transport, and the difficult financial condition of the passenger transport company, which is the main customer.

The passenger transport company sets annual targets for repair of passenger cars and personnel reduction as part of its passenger transport modernization plan. However, it has no future plan concerning the sustainability of the company itself. In the interview meeting, some opinions were expressed such as that the electrification of railways should be promoted and that network expansion toward remote regions in the country is necessary. The fundamental requirement, however, is to draw up a plan to prevent further decreases in passenger transport.

## 3. Feedback

### 3.1 Lessons Learned

#### 3.1.1

**It is necessary to determine indicators to measure the effectiveness of the project at the planning stage.**

The objective of this project was to maintain and increase railway passenger transport capacity by constructing a passenger car repair shop and purchasing new passenger cars. However, no specific indicator to measure the effectiveness of the project had been set beforehand. As a result, effectiveness indicators had to be selected at the time of ex post evaluation. In future, it will be necessary to clearly establish indicators and targets concerning the operations and effectiveness of a project prior to implementation under a new evaluation system, and to agree on them with the executing agency.

#### 3.1.2

**It is desirable to discuss with the government of the borrower country and the executing agency the introduction of a mechanism which enables timely access to the information on changes in the legal status of the borrower or the executing agency, and to verify the mechanism.**

In this project, construction of a repair shop and provision of passenger cars were placed under the charge of different companies as a result of the executing agency's having been incorporated, a situation which made it difficult to evaluate the effects of maintaining and improving passenger transport. With respect to financial status, we cannot obtain sufficient data on the project during the transition period before each executing agency introduces a new financial management system. This is not only the case for Uzbekistan. It is desirable to devise a mechanism to obtain appropriate information in a timely manner in the event of significant changes in the project, such as privatization of an organization, and to reach an agreement with the government of the borrower country and the executing agency in advance so that we can take part in the discussions about privatization or other policies which are to take place within the government of the borrower country.

### 3.2 Recommendations

**(To the executing agency)**

**3.2.1 The executing agency needs to establish a financial management structure.**

The passenger car repair shop was privatized at the end of November 2002 and has been financially independent since then. In the absence of an established financial management structure, the shop uses UTY's financial forms, and necessary revision of the entry items is still under way. The passenger transport company has also yet to establish a financial management structure. In order for both companies to draw up a future plan based on precise financial data, immediate establishment of a financial management structure is advisable.

**(To the executing agency)**

**3.2.2 Research into increasing profits from passenger transport is necessary.**

Under the present difficult situation, including the political condition of neighboring countries, the demand for passenger transport is hardly growing. The passenger transport company is in the red partly due to the government's low fare policy, and receives financial support from UTY. In particular, the number of trains operated on the profit-making international and long-distance lines has been decreasing. Although the demand for short-distance domestic transport is on the increase, profitability is not good. If the passenger transport company cannot maintain its independence and expand its operations, operation of the passenger car repair shop might be adversely affected. In light of this situation, research into policy planning and measures aimed at increasing profits from passenger transport should be carried out in future.

## Comparison of Original and Actual Scope

| Item | Plan | Actual |
|---|---|---|
| 1. Project scope | (1) Construction of passenger car repair shop<br>1) Civil work: 6,280m$^2$<br>2) Equipment<br>3) Training: 30MM<br>(2) Procurement of passenger cars: 25cars<br>(3) Procurement of spare parts<br>(4) Cost of consulting: 103MM | (1) Construction of passenger car repair shop<br>1) As planned<br>2) As planned<br>3) 20MM<br>(2) As planned<br>(3) As planned<br>(4) 107.8MM |
| 2. Implementation schedule | Construction of passenger car repair shop<br>Apr. 1998 – Mar. 2000<br>Procurement of passenger cars<br>Apr. 1998 – Sep. 1999<br>Procurement of spare parts<br>Apr. 1998 – Sep. 1998<br>Consulting services<br>Dec. 1996 – Sep. 2000 | Construction of passenger car repair shop<br>Feb. 1999 – Mar. 2001<br>Procurement of passenger cars<br>Feb. 1999 – Aug. 2000<br>Procurement of spare parts<br>Feb. 1999 – Aug. 2002<br>Consulting services<br>Apr. 1997 – Aug. 2001 |
| 3. Project cost<br>Foreign currency<br>Local currency<br><br>Total<br>ODA loan portion<br>Exchange rate | <br>6,102 million yen<br>2,037 million yen<br>8,139 million yen<br>6,102 million yen<br>1USD = 102.01 yen<br>(As of Jun. 1996) | <br>6,097 million yen<br>3,383 million yen<br>9,480 million yen<br>6,097 million yen<br>1USD = 118.50 yen<br>(Average for 1998 – 2001) |

## Third Party Evaluator's Opinion on Railway Passenger Transport Improvement Project

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### Relevance

The Government of Uzbekistan pays a prior attention to the development of transport communications as to one of the decisive factors during realizing of the national reform's strategy. In this context improvement of the Railway Passenger Transport (RPT) is getting increasing social and political importance. From the one side RPT is really convenient for the low-income people, from other side development of the RPT Network is the strengthening Nationhood and better national identity factor. There is no any doubt that RPT improvement Project was and is very actual for the National Development Policy and the Project intentions are responded to the needs of Uzbekistan. Moreover, fast increasing of population, intensive internal labour migration and perspectives of the humanitarian relations with the CIS states will save this needs in the future.

One of the important changes in the background of the project became the decision of the Uzbek Government to construct the new railways connecting northern and southern provinces of the country up to the 2005. This became the object of negotiations on the government level between Uzbekistan and Japan and Germany. Besides that, there are in the process Uzbek-Russian consultations on improving railway transport infrastructure. Position of Uzbek partners consist of recognition need to assist including signing the new loan agreements. All this demonstrating significance of the project as the importance of the sector at whole.

### Impact

Analysis of the quantity and quality of the Uzbek RPT today shows that the overall goal of the project practically have been achieved. Really project helped to improve park of the passenger cars of the Uzbek Railways (URW). Better security and comfort ability of the significant part of the cars made preconditions for increasing number of passengers , especially on domestic short-distance lines. (According non official prognosis in 2003 is expecting increasing their number for 2%).Decreasing number of passengers on international routes had mainly different political reasons. But achievements of the project created conditions for potential sharp increasing number of passengers traveling across borders in case of changing political situation.

Positive impact is the saving foreign currency by URW witch gave opportunity to reduce travel cost in some directions. For example from 01.08.2003 travel cost from Tashkent to Moscow became for 21% cheaper.

Positive impact consist of increasing working places in the URW and further developing of the railway infrastructure. It became the base to adopt some new regulations to stimulate privatization process in the sector. It is possible to say that project also had indirect impact on this process.

Obviously, project design was relevant to achieve effective results. It must be notified that effectiveness of the project is determined not only by economic indicators, but by direct political importance too. Achievements in the developing of any type of transport including RPT make much more attractive the concept of the national independence of Uzbekistan and strengthening authority of the young Uzbek State.