5.6 POSSIBILITY OF RAILWAY-RELATED BUSINESSES

5.6.1 Types of Railway-Related Businesses and the Experience of Japanese Railways

(1) Types of railway-related businesses (RRB)

RRB fall into two categories:

1) Businesses which have an intimate connection with the railway business such as bus, truck, telecommunications, computerized data processing and construction etc.
2) Businesses which not only support the railway business but also develop new business opportunities. E.g. commercial operations in areas such as station-yards and station buildings, travel, retailing, restaurants, hotels, real estate, leisure, and resorts etc.

(2) The experience of Japanese railways

The experience and results of Japanese railways are outstanding on a global scale. The RRB sales of East Japan Railway Company (JRE) group including 90 affiliated companies make up 45% of group's total sales in 1996. The JRE plans to increase RRB sales to 62% in 2001.

RRB of private railway companies are more diversified than that of Japan railway companies (JR). Typical RRB of private railway companies are bus transport and real estate. With growing urbanization, they purchase land in suburbs, construct houses (new towns), open railway stations and supply bus services. In the 3 largest private railway groups, revenues of railway are under 10 % of each group's total sales.

It is important to note that the prosperity of RRB depends on densely populated cities.

5.6.2 Experience of Hokkaido Japan Railway Company (JRH)

Of the 6 JR passenger companies, JRH resembles PKP the most in terms of geographic, climatic and traffic volume conditions, and JRH's experience should be useful for PKP. The business environment is worse than that of the other JR companies in terms of market scale, because Hokkaido is generally an under-populated, cold region. In 1994, the railroad distance was 2,623 km, with 4,810 million passenger-km, and no Shinkansen (bullet train). The roads in Hokkaido cover 84,150 km, 14.8 km per person, and the ratio of passenger car ownership is 0.35 cars per person.

(1) Sales of JRH group

Railway sales in 1995 were ¥90.5 billion, and costs were ¥132.8 billion, resulting in a loss of ¥42.3 billion compensated for by interest payments from the Management Stability Fund. JRH cannot expect a great increase in demand, and wants to grow less dependent on railway operations as quickly as possible.

RRB of JRH are mainly developed by subsidiaries. Table 5.6.3 indicates that subsidiaries which operate RRB have exceeded JRH in sales and the rate of growth since privatization on April 1st, 1987.

Table 5.6.3 Sales of JRH group (in ¥100 million)

	1987	1988	1989	1990	1991	1992	1993	1994	1995
Sales of JRH	726	811	809	857	895	905	902	905	905
Sales of RRB group	**669**	**769**	**801**	**883**	**993**	**1,049**	**1,072**	**1,097**	**1,148**
1. Hotel, restaurant	56	58	58	64	75	75	75	74	73
2. Distribution,	354	397	373	405	438	428	420	411	412
3. Real estate	11	12	22	27	21	51	46	33	51
4. Construction	158	192	224	237	251	259	274	304	321
5. Other service	90	110	124	150	208	236	257	275	291

Source: JRH (Notes: 2. Distribution and commercial facilities, 3. Real estate and leisure)

(2) Development policy of RRB

The public has a high image of JRH in terms of creditability as the largest company in Hokkaido. This plays a very positive role to start RRB. JRH aims to transform from railway industry into a total service industry by developing new business. JRH was reorganized into 3 business divisions (railway division, development projects division and travel division) after privatization. The latter 2 divisions are in charge of RRB. The development projects division has a hotel department (dept.), distribution dept. and a real estate dept., while the travel division has a domestic travel dept., foreign travel dept., group tour dept. etc. Furthermore, a community development planning dept. has been set up in the administrative division (general planning division).

RRB of JRH are operated principally by 39 subsidiaries in order to allow sufficient flexibility and efficiency in their management, whilst retaining well-defined responsibilities. JRH sends approximately 2,000 staff, which is 17% of total staff (11,795), to the subsidiaries, which helps to reduce JRH's payroll burden. The number of 2,000 is about the same as the number of the surplus staff when privatized in 1987. The human resource development dept. is in charge of the staff secondment system. The basic period of secondment is 3 years, but roughly half of them (1,000) volunteer

to extend the period for 3 more years.

New businesses like hotels, supermarkets etc. require professional know-how, so it is important to send JRH's staff to, or borrow experienced staff from, established companies, or invest jointly with them. It is easy for JRH to apply accumulated technologies, such as mechanical, electrical, civil and information engineering to RRB.

(3) RRB promotion methods

1) Franchise

Franchise businesses, like fast-food eateries, are a good way of providing clear and well-established business practices via use of training manuals, to compensate for lack of operational know-how among new staff. The business is run by a JRH subsidiary, and JRH earns money by leasing space in station-yards to the subsidiary.

2) Coin lockers

Coin lockers produce steady profits, efficiently utilizing small space.

3) Utilization of space under elevated tracks

When a major station is elevated, new precious commercial space is created underneath the tracks.

4) Urban development projects

The land in front of Kotoni Station owned by JRH is included in the city's redevelopment project, and JRH acquired 10,000 square meter of floor space in the new building, which JRH can lease to tenants. JRH can turn idle land into highly-profitable commercial space without additional investment.

5) Railway forests

JRH owns huge tracts of railway forests along tracks, serving as barriers to snow and wind. As housing developed along the tracks, part of the railway forests near a major station was cut down, and a hypermarket and small hotel were built in its place.

6) Prefabricated panel for home

A construction subsidiary, which is predicting a future shortage of carpenters, manufactures prefabricated panels for homes.

(4) Problems

The main obstacles to the success of RRB are a lack of proper strategic management and a corporate culture with a standardized way of thinking. It is crucial to develop staff potential by assigning new projects.

The sales of RRB have grown steadily, but it must be remembered that many of the current businesses, such as the real estate business which requires a long pay-back

period, are still below break-even point.

5.6.3 Telecommunication Business

(1) Current state of Poland's telephone

From an international viewpoint, the telephone network in Poland is not yet sufficiently developed, but this shows that the business looks promising (see Table 5.6.4). The telephone sector, including international phone, is now monopolized by one Polish state owned enterprise. PKP intends to separate its telecommunication function from the infrastructure sector into an independent organization (pillar) to prepare for future deregulation.

Table 5.6.4 International Comparison of Telephone Figures

Ranking	Country	No. of subscribers at the end of 1992 (Unit: thousand)	No. of lines per 100 persons (ranking)
1	USA	143,325	56.12 (5)
2	Japan	58,520	47.07 (14)
3	Germany	35,420	43.95 (18)
7	Russia	22,778	15.31 (42)
13	Turkey	9,410	15.98 (39)
17	Ukraine	7,300	14.01 (43)
24	**Poland**	**3,938**	**10.22 (49)**

Source: International telecommunication statistics (Siemens, 1994)

(2) Experience of JAPAN TELECOM Co., Ltd.

JAPAN TELECOM Co., Ltd. was established in 1984 by taking over trunk network lines from Japanese National Railways (JNR), with a view to future deregulation of the telecommunication sector. The company has principally provided long-distance calls, and a complete digital telecommunication network of fiber-optic cable throughout Japan since 1992, and now ranks 3rd with 19.7% share of domestic telephone service. The company was listed in 1994, raising ¥160 billion ($1.3 billion) from the stock market, and is now 52% owned by JRs .

The keys to the success of the company are summarized as follows:

1) The company watched the timing of deregulation, and responded to it quickly.
2) It improved its technological skills and took the initiative in completing a nationwide optical fiber network early.

3) The company was fortunate to be able to bury fiber-optic cable in its existing railbeds.
4) During the JNR days, JNR constructed the first national communication network in Japan. JAPAN TELECOM made the most of such accumulated expertise.

5.6.4 Recommendations for promotion of RRB

(1) Organization

1) To promote RRB, PKP should establish a RRB division which unifies and specializes in RRB. 4 existing pillars (real estate, welfare, railway security service and structural units) would be integrated into this RRB pillar. The real estate department should be the core of future new businesses. It is crucial to place the RRB pillars, including other two pillars (computerized data processing pillar and telecommunications pillar), on an equal standing with the transport sectors in order to heighten staff morale, or it may be recommendable to change the status of the RRB from a pillar to a new sector. Such equal standing is the key to success of the RRB in the Japanese experience.
2) The top management of RRB should be selected carefully after inviting volunteers from within PKP. The management plan the strategy of RRB, and implement it, assisted by the PKP holding company and outside professionals. RRB management then establish subsidiary companies, train and second the right staff there, and assist the independent management to facilitate flexible decision-making, making their results clear and encouraging staff morale. On the other hand, RRB top management control the subsidiaries and coordinate their interests, taking active steps to privatize qualified subsidiaries. Periodical accounts must be submitted to top management and a general meeting, chaired by top management and including all subsidiaries, is held to clearly explain the group's unified strategy.

(2) Practicable means to promote RRB

1) Basic policy

The Polish economy is growing at the highest rate of all European countries, and PKP has many business opportunities. Priority of development should be given to station-yards and the neighborhoods around stations for commercial use because of the high profitability and relatively low risk. It is important to make a profit on station businesses first and later develop into towns. New business should be practiced through subsidiary companies in principle. Among the subsidiaries, core companies should be

promoted in businesses such as commercial station buildings, hotels, retailing, restaurants, real estate development and advertising. Core companies can build cumulative business know-how and share it with each other. As a result, the individual role of each subsidiary company shall be made clear and total group profitability shall be improved by such cooperative management. Chain operations which use the same brand throughout Poland, for example, is one good measure to make retail businesses efficient because of the broadness of PKP's market area.

2) Leasing businesses in station-yards and advertisement

These businesses can make use of PKP's advantageous locations, and require low initial costs and are profitable, with sales almost equal to profit.

a Clean, light and heat station-yards, and make stations comfortable, cheerful and pleasant. The brighter and cleaner the station, the more passengers and the income from advertisement will increase.

b Expand the station-yard area suitable for good for business by moving the station-office to a less prominent location.

c Revise term of current lease to, for example, a 1 year contract, and replace third party leaseholders with operations by PKP or PKP subsidiaries for profitable locations.

d d. Station buildings with shopping centers for lease is one of the typical RRB of JRs. The rent from tenants is indexed to the sales of tenants. Initial cost of the business is relatively small because approximately 70 % of construction cost is financed by deposit money from tenants contracting the space.

3) Acquire shares of external companies

As a means of enlarging RRB, the acquisition of shares in established successful companies or mergers with them should be considered. It is advisable that, at first, such companies already have some connection with PKP, for example truck, bus, rent-a-car, construction, travel agency, dining car, kiosk, restaurant, advertising agency, hotel, security company.

4) Computerized data processing and telecommunications

These businesses have a promising future, and the 2 pillars should remain independent. They should be promoted by suitable means.

5) Ask for experts' instruction

It is indispensable when undertaking a new business to ask for external experts' instruction. When undertaking a travel agency or department store, it is necessary to send staff to specialized companies for several years, and to cultivate future leaders.

6) Real estate

PKP has advantages in possessing a lot of land conveniently located. PKP is surveying

all areas, and the surveys' findings should identify many business opportunities such as hotels, shopping centers, housing etc. .

5.6.5 Implementation Schedule for Development of RRB (cf. 4.3.3, 5.2.1)

Implementation schedule for development of RRB by privatization phases is shown as follows:

Table 5.6.5 Implementation schedule for development of RRB

1st phase (1997~1998)	Divide the 6 functions of real estate, welfare, computerized data processing, telecommunication, railway security service and structural units into independent pillar organizations under the direct supervision of a Management Board. Real estate pillar becomes the core of the RRB and it surveys current real estate, and changes its name to RRB pillar. Each pillar and sector estimate the internal exchange of services and calculate the costs to be claimed for preparing future accounting and organizational separation. Plan for selecting, training, transferring staff in-charge of RRB is prepared.
2nd, 3rd phase (1999~2002)	RRB pillar merges with 3 other pillars (welfare, railway security service and structural units), and promotes RRB by means of subsidiary companies under a unified strategy. A 3 year secondment system to subsidiaries is implemented for all staff. Core companies are promoted by types of businesses. Direct privatization such as leasing, staff buy-outs or strategic sales, is advanced.
4th phase (2003~2005)	3 pillars (RRB, computerized data processing, telecommunications) are separated and transformed into JSC. Expansion and/or restructuring of RRB assisted by holding company by means of merger, acquisition and joint-investing with outside expert companies progress. Direct privatization is continuously encouraged.
5th phase (2006~)	Advance listing of qualified subsidiaries and 3 RRB JSC on the stock exchange.

5.7 INVESTMENT IN EQUIPMENT AND FACILITIES

5.7.1 Policies on Investment

The accumulated short amount of investment in infrastructure by PKP from 1989 to 1996 reached 5.8031 billion PLN (Table 3.6.3). As seen in this figure, delay in modernization of infrastructure is conspicuous (see 3.6.1 Subjects for Infrastructure). A same tendency is seen with rolling stock, with an average length of service of 17 years. In addition,

inspection and repair work has also delayed to large extents.
Increases in investment will worsen the finance of PKP. In addtion, subsidies by the government cannot be expected much, given its constrained financial situation at present.
To effectively utilize such limited amounts of funds and acquire competitiveness against automobiles and other transport facilities, it will become more important than ever for the privatized company to implement investment plans on a priority basis.
Based on the present status of railway facilities we surveyed in this study to support the privatization of PKP, we propose that investment in equipment and facilities be promoted concentratedly and efficiently on a priority basis according to the following policies.

(1) Modernize the most important lines under AGC and AGTC international contracts, length 5,000km, out of the entire 17,000km-long railway network.

(2) For other lines, limit the amounts of investment only to ensure the safety of train operation and transport capacities to deserve the degree of importance.

(3) In privatizing PKP, invest in business fields where advantages of railway can be demonstrated in the future, while taking into consideration specific features of railway passenger and freight transport in the markets in Poland.

(4) To rationalize the employment structure, invest in projects for improvement, manpower saving and mechanization.

(5) In consideration of the present status of rolling stock, invest in locomotives and passenger cars for high-speed operation and passenger comfort (procurement and modernization).

(6) Invest in environmental preservation projects according to relevant laws and regulations.

In planning investment in equipment and facilities, profitability and its effects must be weighed more than ever.
The amount that should have been invested in 1989 to 1996 reached 5.8 billion PLN (about 6.0 billion PLN at the value in 1997). In addition to the above policies on investment, we propose to the government of Poland to assist PKP with 2.0 billion yen (at the value in 1997) or one third the amount of shortage in the past, during the period from 1998 to 2000 as an additional investment to prepare for privatization, while considering the amount of present subsidies for infrastructure by the government.

5.7.2 Investment Plan for Equipment and Facilities

To prepare for the privatization of PKP and separation into freight, passenger and infrastructure divisions in the future, we propose to invest in the following projects on a preferential basis (Table 5.7.1).

(1) Freight Transport

①Changing yard layouts to cope with decreases in the volume of transport through yards.
②Improving freight terminals.
③Replacing superannuated rolling stock
④Introducing high-speed locomotives and container freight cars for complex transport.

(2) Passenger Transport

①Replacing the existing fleet to high-speed rolling stock for inter-city transport
②Introducing rail buses into local lines.
③Installing waste tanks on passenger cars for environmental preservation
④Introducing automatic ticket vending machines into major stations

(3) Infrastructure

①Modernization and speed-up on AGT and AGTC contract lines (E-20, E-59, E-65 and CMK).
②Rationalization of operation (introduction of CTC and modernization of signal and telecommunication facilities)

Table 5.7.1 Preferential projects

(1) Freight transport

Transport field	Investment in infrastructure	Investment in rolling stock
Train-unit transport	• Improvement of transport facilities to smoothen transport from departure to arrival stations. • Improvement of departure and arrival bases to expedite direct transport.	• <Rolling stock> : Modernization of rolling stock and introduction of commodity-wise freight cars
Car-unit transport		• Modernization of existing rolling stock
Complex transport	• Improvement of AGTC lines and other selected lines for complex transport	• Modernization of existing rolling stock and introduction of high-speed cars (container cars) • Introduction of high-speed locomotives

(2) Passenger transport

Transport field	Investment in infrastructure	Investment in rolling stock
Inter-city transport	• Construction of a railway network for maximum 160km/h operation based on the AGC agreement • Construction of a railway network for maximum 120km/h operation to complement networks for higher-speed operation. • Introduction of automatic ticket vending machines into major stations.	• Procurement of rolling stock for 160km/h operation and of the pendulum type, and modernization of existing fleet • Modernization of existing locomotives and procurement of new locomotives
Urban transport	• Modernization of existing lines • Introduction of automatic ticket vending machines into major stations.	• Modernization of existing EMUs and procurement of new EMUs
Local line transport	• Introduction of a remote control system and radio communication facilities into low-density lines	• Procurement of rail buses

5.7.3 Investment Amounts

Table 5.7.2 shows the amounts and breakdown of investment calculated based on the records of investment in the past and plans for the future by PKP according to the policies on investment explained in the section 5.7.2.

The annual investment of 400 million PLN from 1998 to 2002 in Table 5.7.5 are subsidies by the government to be appropriated to the projects for speed-up and rationalization.

Table 5.7.2 Investment amounts In million PLN

Year	Necessary amount	Additional investment	Total	Breakdown	
				Infrastructure	Procurement of rolling stock
1996	(Actual) 1,871	-	1,871	1,590	281
1997	(Planned) 2,082	-	2,082	1,770	312
1998	2,291	400	2,691	2,287	404
1999	2,513	400	2,913	2,476	437
2000	2,591	400	2,991	2,542	449
2001	2,846	400	3,246	2,759	487
2002	2,971	400	3,371	2,865	506
2003	3,047	-	3,047	2,590	457
2004	3,163	-	3,163	2,689	474
2005	3,483	-	3,483	2,961	522
Total	26,858	2,000	28,858	24,529	4,329

(Note) Value in 1997

Such investment plans must be promoted by the infrastructure sector (company) for infrastructure and by freight and passenger transport sectors (companies) for rolling stock.

5.7.4 (Methods of) Financing Investments

(1) Sources of finance (in order of increasing cost and volatility) are

1)Government grants
2)Government loans
3)Long-term credit bank (does not now currently exist in Poland)
4)International development banks e.g. IBRD (World Bank), EBRD, EIB, and PHARE
5)Commercial banks
6)Bond issues
7)Convertible bonds (after privatization)
8)Share issues (after privatization)
9)Leasing

(2) The cost of Domestic Vs foreign funds

In deciding whether to borrow money from domestic or foreign sources, the PKP has to choose between
1)high interest rates in Poland (due to inflation and the monetary situation) and
2)taking on foreign exchange risk (when borrowing in foreign currency)

(3) Polish Government guarantees

1) A partly or wholly privatised PKP might not be eligible for a sovereign guarantee.
2) A long-term credit bank is required in Poland
3) The cost of funds is likely to be
- with guarantee Eurobond market for 5 years maturity US$ LIBOR + 40 b.p. (BBB-rating) and +65 b.p. (BB rating).
- without guarantees the spread may easily reach 300 b.p.

(4) Current situation

The current situation of external financing of investments is in chapter 2.2.

(5) Financing PKP after PKP's restructuring will still be not much easier because

1). all parts of the current PKP will remain united within one holding company and
2) any lender therefore takes on the risks of the whole of the PKP

(6) Financing possibilities in Poland

If financing by other means is not possible, the PKP should consider

1) Syndicated Loans : might typically be for 5 years at LIBOR +25-30 b.p. LOT (Polish Airlines) borrowed 3 months ago for 2 years at LIBOR +65 b.p. Polish Telecom borrowed for 5-7 years at LIBOR +30 b.p.
2) Bridging Finance : This is a short-term loan the purpose of which is to have funds until a known bond issue date. The interest rate is likely to be just above LIBOR.
3) Leveraged lease : (e.g. if rolling stock is separated into a different company and this company sets up leases with the operating companies). A special purpose company (SPC) can be set up to own railway assets and this company can lease assets to the operating companies. The value of the assets of the SPC and revenue from leasing can be used to get loans or investment from outside. e.g. equity or senior debt.

(7) Recommendations for financing specific investments

The advice that follows in this section is based on discussions between the JICA team and Polish financial institutions, Japanese financial institutions and leasing companies. The PKP will be able to finance specific investments more cheaply / easily under the following scenarios :

1) for financing infrastructure

- infrastructure is separated from the rest of the PKP into a new company (PKPInfra)
- PKPInfra is allowed to recover the total of all its costs plus a Return On Assets
- PKPInfra is perceived by the "markets" to be independent /well managed

2) for financing locomotives

- locomotives are separated from the PKP into several locomotive companies (say PKPLoco's)
- the several PKPLoco's genuinely compete against each other
- there are several railway operators
- if to be repossessed, the use of PKPInfra's track will be possible
- PKPLcos is perceived by the "markets" to be independent /well managed

3) for financing rolling stock

- rolling stock is separated into several rolling stock companies (say PKPCar's)
- the several PKPCar's genuinely compete against each other

- there are several freight and passenger railway operators
- if to be repossessed, the use of PKPInfra's track will be possible
- PKPCars is perceived by the "markets" to be independent /well managed

4) for financing property development

- any property to be developed is separated into an independent company or is owned by a property company that is separated from other PKP activities (say PKPProp)
- tenancy agreements are in place at "market rents"
- PKPProp is perceived by the "markets" to be independent /well managed

5) for financing "Railway Related Businesses" (RRBs)

- a Railway Related Business is separated into a new company (say a PKPRRB)
- the PKPRRB charges "market rates" for its products or services
- the PKPRRB is perceived by the "markets" to be independent /well managed

(8) Financing Requirements

1) State Assistance

It is assumed that the State will assist the PKP to finance its investment program[7] i.e.

- by means of increased subsidies and grants or
- State guarantees in order to get loans from international development banks.

2) External funding summary

The external funding position (for investments) is shown in the following table :

Investment financing

Phase	Government funds (million PLN)	Other external funds (million PLN)
Phase 1 (1997-1998)	1,200	943
Phase 2 (1999-2000)	1,600	518
Phase 3 (2001-2002)	1,600	543
Phase 4 (2003-2005)	1,200	(154)
Phase 5 (2006 -)	400 per year	(1,850)

[7] Approximately 30 billion PLN of capital investment by 2005

5.7.5 Implementation Schedule of Investment Plans

Table 5.7.6 shows the implementation schedule of investment plans in different phases of privatization.

Table 5.7.6 Implementation schedule of investment plans

Phase	Details of investment
Phase 1 (1997 - 1998)	• Additional investment by the government (400 million PLN per year) in the infrastructure sector for five years after 1997 for speed-up on AGC and AGCT lines and rationalization of infrastructure • Promotion of manpower saving and mechanization measures to rationalize the employment structure (e.g., introduction of automatic vending machines and expansion of CTC sections) • Reduction of low-efficiency freight yards and shunting bases • Introduction of rail buses into local lines
Phase 2 (1999 - 2000)	• Continuation of investment for speed-up and modernization • Continuation of investment for manpower saving and mechanization • Improvement of freight terminals and integration or abolition of freight yards and shunting bases • Modernization of rolling stock workshops • Scrapping of superannuated passenger and freight cars, improvement of accommodations and introduction of new type rolling stock. • Introduction of rail buses into local lines
Phase 3 (2001 - 2002)	• Continuation of investment for speed-up and modernization • Continuation of investment for manpower saving and mechanization to rationalize the employment structure • Modernization of rolling stock workshops • Procurement of high-speed rolling stock • Procurement of high-speed locomotives, container cars and containers for complex transport
Phase 4 (2003 - 2005)	• Continuation of investment for speed-up and modernization • Continuation of investment for manpower saving and mechanization to rationalize the employment structure • Improvement of major passenger stations as complex terminals • Improvement of complex facilities at major freight terminals • Continuation of renewal and procurement of rolling stock
Phase 5 (2006 -)	• Promotion of investment plans autonomously adopted by the infrastructure company, three passenger transport companies and two freight transport companies

5.8 GOVERNMENT SUBSIDY

5.8.1 Government Policy for Subsidy

The rules of the government subsidy are constituted by the PKP Law and Railway Transport Law and cover the following activities:

- investments in railway lines of national importance and costs of liquidation of closed lines
- targeted subsidy for passenger transportation (agglomeration, regional and inter-

regional) as a compensation of difference arising between the amount of justified costs for domestic passenger transport with the profit margin and the amount of revenues obtained for such transport

- execution of subsidy is conducted by agreement between the government and PKP

The total government subsidy for the PKP (without railway health care) amounted to 1,057 bn PLN in 1997, equivalent to 0.83% of the total state budget expenditure and indicated an increase of 14.6% as compared with 1996. In real terms the growth rate is very moderate, close to zero, with an assumption of the inflation rate on the level of 13.5 - 14.5%.

In 1997 the government subsidy was allocated to:

- targeted subsidy for domestic passenger transportation, 710 million PLN (67.1% of total subsidy).
- investment subsidy, 347.6 million PLN (32.9% of total subsidy).

The targeted subsidy for domestic passenger transport is to increase by 24.2% PLN in 1997, considerably higher than the inflation rate. The State Budget Law projects a nominal decline of investment subsidy by around 8%, which denotes de facto a 20% reduction in real terms in 1997. The subsidy for railway health care amounts for 470 million PLN. Its increase by 20% is higher than the expected inflation rate. There will be no investment subsidy for railway health care in 1997.

The negotiations between PKP and government on subsidy for passenger transportation in 1998 have not been successfully terminated yet (end of September 1997). The controversy point is an amount of targeted subsidy for passenger transportation as a compensation for the difference between revenues and justified costs. PKP, following its cost allocation to passenger and freight transport, has indicated a high loss for passenger transportation.

The „hard constraint budget" statement of Ministry of Finance has offered an increase by inflation rate only. The government has argued that the PKP requirements could not be matched due to:

- wrong cost allocation to passenger and freight transport, which generated too high loss for the passenger transport („hidden" cost transfer from the freight to passenger transportation)
- lack of improvement in cost rationalization, i.e. that the total costs grew by 16% while the total revenues only by 14.2% in 1996. The ratio between revenues and costs declined by 1.6%.

5.8.2 Desirable Government Subsidy

The desirable government subsidy for railway transportation is discussed in the interdependence among the following factors:

- government financial possibilities
- PKP needs
- requirements of the European Union

The government approach to PKP subsidy is determined by the following factors:

- state budget policy as indicator of general macroeconomic performance
- general transport policy
- execution of the PKP Law

The performance of state budget policy is probably one of the most spectacular achievements in the transformation processes of Polish economy. The relation of the state budget deficit to GDP considerably declined from 6% in 1992 to a level of 2.6% in 1996. These results indicate the fulfillment of fiscal requirement for the European Monetary Union (Maastricht Treaty postulates 2.9%).

The policy of low budget deficit and low public debt will be continued in the next years. The government projects a further reduction for to the level of 2% in 1998 and to 1.7% in 2005.

The state budget policy is also reflected by limitation of targeted subsidy. The State Budgetary Law for 1997 distinguished only 5 positions. The government subsidy for railway passenger transportation amounts for over 70% of total targeted subsidy in 1997.

The conducted transport policy determines the investment subsidy only for investments on railway lines of the AGC and AGTC agreements in the framework of subsidy on railway lines of national importance. Total subsidy for railway investments should amount for 3.5 bn PLN in the period from 1996 to 2005, an equivalent of 41.1% of the total investments in the lines of national importance. It denotes approximately 350 million PLN annually.

The execution of the PKP Law is formulated by the agreement between the government and PKP. The investment subsidy is limited to the lines of national importance and liquidation of closed lines. The targeted subsidy for passenger transportation should compensate the loss, caused by justified costs exceeding revenues. The government regards that the PKP cost allocation is wrong („hidden" cost transfer from the freight to passenger transportation) and there is no improvement in the PKP commercialization.

PKP approach to the government subsidy results from different foundations. The amount of subsidy should take into account the following determinants:

- execution of the PKP Law

- PKP limited impact on cost rationalization
- necessity of government aid for investments

PKP demands the execution of the PKP Law according to its legal formulation. The government should accept the loss in passenger transportation, because:

PKP has a limited impact on cost rationalization, 90% passenger tariffs are set up by the government under the inflation rate, while the costs follow the inflation rate.

PKP employment rationalization is under strong influence of from trade unions pressure to maintain the „social peace"

PKP cost rationalization is also „biased" by the transportation performance on loss generating light density lines and, maintenance of non-core activities as housing, social or health services.

The PKP approach regards that the government participation in railway investments is too low. The government subsidy covers only 41.1% of investments in the lines of national importance. It means that the government share amounts for approximately 20% in the total PKP investments, e.g. 22.6% in 1996 and 16.5% in 1997. In PKP opinion an increase of government aid is necessary due to the investment shortfalls in the last years and projected modernization of the enterprise.

The EU approach to railway subsidy postulates the following activities:

- government subsidy can not be transferred between infrastructure and railway operations
- implementation of public service contracts (PSC) agreed by the government and railway operators (as opposed to the imposition of obligations on transport operators) for public services of agglomeration, urban and regional passenger transportation
- government should pay full compensation for public services and exceptional social costs, also including specific infrastructure investment as to compensate the unpaid external costs in the road transport or to meet non-transport objectives (e.g. regional development)
- government should relieve railways of the debts of the past
- government financial support for the railway restructuring programs (social package for retraining, retirement benefits etc.)

Considering the present subsidy rules and different approaches, represented by the government, PKP and the EU directives, it is postulated to increase the government participation in the railway transformation.

The proposed increase of government subsidy shall match three fundamental criteria:

- lack of deregulative impact on the State Budget Policy
- increase of government aid for PKP

- fulfillment of EU Directives

It is proposed a government grant of 2 billion PLN (588 million US$) for the five year period from 1998 to 2002, proportionately divided into amount of 400 million PLN annually. [8]

The grant would be aimed at:

- capital investment for PKP

The financing could be performed by a issue of domestic Treasury bonds combined with a government issue of bonds on international markets (denominated in US$, DM or Yen). From the financial point of view the government loan for PKP grant shall be divided into 2-5 annual issues (respectively between 1 billion PLN and 400 million each) due to its relatively large amount in the present Polish circumstances.

The effects for the State Budget Deficit are presented in the table below.

Financial Impact of Grant on the Budget Deficit in 1998 - 2002

	Projected Budget Deficit *		Projected Budget Deficit with Grant		Growth Ratio of Budget Deficit due to Grant
Years	% of GDP	billion PLN	% of GDP	billion PLN	%
1998	-2.0	-10.1	-2.08	-10.5	4.0
1999	-1.8	-10.3	-1.87	-10.7	3.9
2000	-1.7	-10.9	-1.75	-11.3	2.9
2001	-1.7	-12.2	-1.76	-12.6	3.5
2002	-1.7	-13.6	-1.75	-14.0	2.9

* Source: Poland 2000. The New Economic Strategy, Warsaw 1996

The calculations have been conducted by using the official government publications on development of GDP growth rate, inflation rate and the budget deficit for Polish economy

The grant impact on the State Budget Deficit results in its deterioration by 0.08% in 1998 to 0.05% in 2002. The growth ratio of the budget deficit due to the grant indicates an annual increase of the budget deficit from 4% in 1998 to 2.9% in 2002.

The financial impact of additional government subsidy seems to be acceptable from the macroeconomic point of view. The estimated deterioration of the budget deficit does not deregulate the financial policy of government. The fulfillment of the Maastricht criterion is also ensured.

The impact of the proposal is more visible from the PKP point of view. The grant would mean a significant aid for PKP. An increase of investment subsidy would be higher than

[8] The explanation to the draft Act to set up a Restructuring Agency states that this would cost the government about 400m PLN per year for 5 years.

100% annually. The „new" government participation in the total PKP investment will increase to the level of 28.4% in 1998 and 21.4% in 2002.
It is also postulated the government subsidy for domestic passenger transportation covering agglomeration, regional and inter-regional transportation. The qualified passenger transportation shall generate profits (see section 3.4). It is proposed:

- introduction and implementation of negotiated public service contracts (PSC)
- gradual decentralization of decision centers for contracts to local governments

The subsidy should be conducted in the form of contracts between the government or local governments and railway company or companies. The operators, selected according to the tender regulations, should receive a full compensation of losses, resulted from public services and exceptional social costs.
The contracts, especially for agglomeration and regional transportation, shall be transferred to the level of local governments. It could positively affect the rationalization processes in liquidation of low density lines or limitation of unprofitable transportation. The local governments would accelerate the liquidation processes of unprofitable lines (reduction of subsidy), if the governments could have a certain influence on the fund allocation to other activities.
On the other hand the cost rationalization and commercialization of railway operators, forced by the negotiated contracts and potential competition, should also lead to a rationalization of the government subsidy.
Generally, the total targeted subsidy shall not exceed its present level, however it shall be corrected annually by the inflation rate.

5.8.3 Analysis of Efficiency of Subsidy

The analysis of subsidy efficiency should be conducted by the Ministry of Transport in the form of periodical evaluation. Ministry of Transport should elaborate a set of standard routines and rules for control functions. The analysis of investment subsidy must cover all stages for each investment task. First, the projects shall be analyzed in accordance with their expected improvements in the railway operations, financial aspects, conducted transport policy and fulfillment of the EU requirements. The aims of projects have to be determined in a detailed manner and supported by their feasibility analysis. The contractors should be selected according to the tender rules, included in the Law on Ordering of Public Works. The government must have the right to permanent control of conducted tasks. The performance of investments should be periodically reported and monitored. The costs and quality evaluation of projects, conducted in different regions,

have to be compared and investigated periodically. Also international comparisons are recommended, e.g. for unit costs of similar investment tasks. The control body should have full competencies to stop the conducted projects, if the projects would not satisfy the imposed requirements.

The efficiency of targeted subsidy for passenger transportation should be also analyzed. The contracted passenger transportation must be based on the tender procedures in the case of at least two operators. The conditions of contract between government or local governments shall be carefully negotiated.

The efficiency procedure should evaluate the proposed amount of loss to be compensated by the government (local government) side. The amount of social costs, determined by the social protection policy and the demographic structure, must be estimated.

The evaluation of unit costs and revenues can be also performed on the background of inter-regional and international comparisons. The analysis of improvement shall cover efficiency, quality and reliability for transportation services in particular market segments.

5.8.4 Government subsidies by phases

The government subsidies by phases is shown in the following table :

Government subsidies by phases (m PLN)

Phase		Passenger subsidy	Investment subsidy	Total
Phase 1 (1997-1998)	1997	571.5	400	971.5
	1998	571.5	800	1,371.5
Phase 2 (1999-2000)	1999	571.5	800	1,371.5
	2000	571.5	800	1,371.5
Phase 3 (2001-2002)	2001	571.5	800	1,371.5
	2002	571.5	800	1,371.5
Phase 4 (2003-2005)	2003	571.5	400	971.5
	2004	571.5	400	971.5
	2005	571.5	400	971.5
Phase 5 (2006 -)	2006	571.5	400	971.5

5.9 HUMAN RESOURCE DEVELOPMENT

PKP has indicated a pressing need to modify its human resource function while it goes through a painful transition from the old Communist influenced method of staffing under the quota production system to a market-based commercial sector organization embracing market driven solutions with professional style human resources management and development. The transition will not be easy and changes are expected to be slow, particularly as both older managers and many members of the trade unions have never known any other system.

The primary cultural shift, albeit painful for staff with many years of service, concerns the basic rules of employment tenure. Lifetime employment is a reward for high quality service to the organization rather than a right of all workers.

5.9.1 Training System

PKP has developed ongoing training programs for its personnel. Training consists of three essential levels:

- Trade/Vocational at the High School Level - courses given for signal/electrical, power engineering, train drivers, welding, machinists and the like. Ample railway training programs are located throughout the country.
- Professional - consultants have developed several basic business development and marketing courses for such anticipated commercial-sector activities as accounting, marketing, financial management and cost analysis. These course are administered with funds provided by the European Union PHARE program. Demand far exceeds supply such that average wait time to receive basic business training is over two years. The time should be shortened considerably.
- Specialized Courses - are given to certain managers who require it on an as needed basis. For example, a manager in the Productivity Assessment Department had received specialized training in industrial process control methods for a variety of ergonomic and logistics applications.
- Education. As a function of inheriting many workers under the old system of full employment, education of the labor force is as follows:
  Currently about 4 percent of PKP staff attended college, 36% have high school education, the rest have elementary or occupational level education. PKP projects 10% will have a college education and 60% will have completed high school by the year 2,005.

Aside from the mini-courses provided by outside consultants, PKP relies heavily on on-the-job training for tradesmen to be promoted from apprenticeship positions to fully qualified train drivers running fast trains, for example.

Recommended training improvements are outlined below:

1. Changing the culture from old methods and technology to new. This is a classic problem in railroading. The solution is obvious but elusive. As new technology and methods are introduced, workers will be forced to learn new methods on the job. The ratio of experienced to inexperienced personnel must be kept low by regionally and functionally rotating positions across PKP regions and posts. For example, the introduction of high speed trains and automatic train control systems requires experienced operating, maintenance and engineering staff to ensure reliability over time. One way to stem the difficulties is to write training programs into the cost of acquiring new equipment such as locomotives and rolling stock, track-work, signal devices, and automation. Employees are generally willing to learn new methods if they are given the proper training.

2. Functional Job Rotation - typically a railway worker may spend his entire career in the Track Department or an Operating/Exploitation Department. Alternatively, many Japanese railways require their staff, especially middle and senior management, to internship at all core railway departments for a period of several months per department. When the manager returns to his/her department after this experience, they are better equipped to understand how to facilitate the smooth integration of seamless transportation from a systems perspective and may take advantage of job vacancies in another department in the future.

   Professional Development - because of the pace planned for privatization and the realistic limits on available investment funds, the larger problem of training for the PKP arguably lies in those responsible for understanding and implementing new methods of cost controls, sales, marketing, budgeting, logistics and engineering methods It is recommended that the following approaches be considered immediately. Have top and middle managers apprentice in foreign freight operating departments and Japanese passenger departments. In exchange, PKP can pay back through a variety of mechanisms including developing combined transport agreements with donor railways, agreeing to sole-source a percentage of new supply acquisitions or combined train service to those nations supplying the expertise. In addition, PKP should investigate the use of EU-PHARE, IBRD, JICA, and other funding sources to achieve this goal.

5.9.2 Personnel Management System

Top-Down Structural Reform Model - As the vertical model is fully implemented, the railway management structure should serve to give top and mid-level managers a high level of accountability. For example, we divide the freight sector into key commodity groups and assign a top-level manager to run that group. The Assistant General Director - Coal, is directly responsible for the fiscal well-being of that product group and is compensated accordingly. His direct and indirect reports represent a sales team dispersed regionally throughout the country that answer to him. His base compensation package is tied to the performance of the coal business with a highly variable bonus potential should he exceed his sales targets for the fiscal year. A system of this sort can only be implemented once an FMIS is in place.

PKP is a long way from implementing a management structure of the type described above but can begin to emulate it based on the ability to track regional and ultimately line-level profit and loss through a timely FMIS. Steps have been taken to appoint sector-level managers to begin this process.

At one Railway, top management recently completed its fourth generation management re-organization where job descriptions are written for the top posts by the President and the Board. The President personally interviews his five Vice Presidents including the incumbent in each position. The process is competitive and the most qualified and experienced man is selected from the applicant pool as his direct report. Once appointed, the next level of subordinates is recruited from both within and outside the railway after the Vice Presidents write their job descriptions. May the best man win the post. The process works all the way to the Line Supervisor's post at responsible for the actual work teams in the field. This system has caused pain at this railway because many incumbent managers have lost their positions to the competition. Yet in general, those who survive become integrated with those brought in from the outside and the railway management and supervision is strengthened through the process.

1) Job descriptions

We could find *no clearly written job descriptions* to attract talented individuals to PKP except for top manager posts.

Recommendations. As part of its structural reform program, PKP should have a clearly delineated set of job descriptions for all sectors and posts in both core and non-core

functions. To the best of our knowledge position responsibilities do not exist at PKP. Posts describe the expectations of the individual during the performance of their duties, the number of tasks assigned, the number and description of subordinates duties (as appropriate), the basis points for performance evaluation, the reporting structure for this post; and a set of minimum experience, qualifications and education required to fill the position. Points assigned to the position establish and dictate the level of base pay. A well written description of responsibilities avoids future conflicts and allows the individual and supervisor to judge performance objectively. In addition, the position should be updated twice a year along following the review of the individual by their direct supervisor.

2) Performance-based pay to Achieve the high-performance Railroad

At present, PKP has approximately twenty five (25) components built into its wage structure including night time and weekend work, dangerous work, overtime differentials, qualifications based differentials and many others. Negotiations are underway to simplify the number of wage categories into the following elements including; 1) basic work the individual is charged with; 2) difficulty of work, 3) responsibility level of work and ; 4) additional categories of work. A bonus fund would be awarded for at least fifteen (15%) of the budget available for wages and the employee would be evaluated by his/her direct supervisor. Bonus amounts would be given for additional tasks and accident prevention.

Alternatively, the implementation of a three tiered performance-based pay system is recommended as follows :

Bonus Tier 1 - Company performance - twenty (20) percent of the total bonus potential is based on the performance of the company as a whole. We develop an index rather than an absolute number for this evaluation because we recognize that the company may not make profits in the early stages of privatization. Rather, an index of profitability can allow bonus points to be awarded even when the company as a whole is not profitable. Importantly, staff shall be rewarded for their efforts to improve company performance relative to the pervious year and should not be held accountable for factors beyond their control because a performance-based pay system should always establish achievable targets on a moving basis as net profitability improves over time. Hence the system provides positive incentives rather than structuring a penalty-based program.

Bonus Tier 2 - Sector/Pillar Performance - the approach is similar to the first tier except the amount of the potential bonus to represent thirty (30) percent of total possible bonus. Hence performance of the team is valued fifty (50) percent higher than overall company performance. This establishes the basis for one sector to compete with another to achieve the best performance across sectors functionally and regionally. The most important element is the ongoing adjustment coefficients used to establish the basis of the award criteria for bonus between and amongst sectors in the Tier 2 category. We recommend the relative levels be set by an independently appointed assessment board and reviewed/adjusted quarterly.

Bonus Tier 3 - Individual Performance - this element of the bonus pay system is perhaps most important. As a result, we set aside fifty (50) percent of the total achievable bonus pay for this category. Two overall drivers are created to base the individual's performance, as reviewed semi-annually by the direct supervisor:

Productivity Driver - for each class of post (functionally determined) a productivity driver is established and an index developed from 1 to 10 to evaluate productivity-based performance. For example, PKP now uses a loose criteria for its ticket sales agents to determine whether a post shall remain: the agent must sell two times their annual wages in ticket value or the post is not economically justified. In non-revenue producing posts, the driver is a productivity value closely tied to the nature of their work. For example, a track-worker is judged by number of meters of new rail laid or inspected over a period of time depending on specific responsibilities.

Quality Driver - this driver is more difficult to develop but is essential to PKP improving its customer service orientation. For the traffic control dispatcher, the driver might be relative decreases in train conflicts or a measure describing on-time arrival for the train driver. The loco maintainer could be judged by the quality of his work using a combination of loco reliability and by evaluating the time to produce a given work unit meeting minimum quality standards. Alternatively, the time spent in a car bay might be used to describe a wagon maintainers quality again coupled with equipment reliability measured over time. These drivers are exceedingly difficult to establish because many factors go into reliability and on-time performance. Thus the quality driver must be carefully selected and its application reviewed regularly with continuous adjustments as appropriate.

Multi-craft bonus - In addition, a special bonus allocation is recommended and awarded for individual performance accepting tasks which are outside the individuals

job description. We call this cross-functional flexibility and it is the best way to decrease the number of crafts which must be present on any given work team in the field. For example, fixing a broken rail in the field might require laborers, supervision, a welder, a burner and a grinder along with a signal maintainer. If the welder is willing to take the place of the welder and the burner, three functions have been consolidated into one and the direct labor savings can be passed along equally (50/50) between the company and worker as a bonus. Similarly, any equipment and material savings directly accruing from the worker accepting multiple on the job tasks above his/her job description is rewarded by the same split.

Mobility Bonus - the last bonus category concerns the willingness of an individual to take on a new assignment where the railroad most needs to assign him or her. The assignment could be temporary or permanent. Further, direct benefits for temporary assignment include the provision of a housing flat for the duration of the assignment, relocation costs associated with moving as well as free and unlimited telephone service over PKP's existing network.

5.9.3 Human resource development by phases

The human resources development by phases is shown in the following table :

Human resources development by phases

Phase	
Phase 1 (1997-1998)	- introduce functional job rotation - training in foreign countries
Phase 2 (1999-2000)	- make job descriptions - introduce performance-related pay
Phase 3 (2001-2002)	- reduce / eliminate PKP benefits and allowances
Phase 4 (2003-2005)	- introduce profit-related pay
Phase 5 (2006 -)	-

5.10 MANAGEMENT OF PASSENGER TRANSPORT

5.10.1 Basic Concept

(1) Criteria of passenger service

As a result of improved living standard, Polish people who can freely select transport facilities are now requiring more comfortable travel time and various high-level transport services. Therefore, PKP must establish concrete targets of passenger service criteria in different divisions to reinforce the management foundation to survive the competition in a market economy. For inter-city transport, for example, a target must be set to connect major cities within three hours at an average load factor of 70% over a whole day.

(2) Passenger Terminal

1) Improvement of passenger terminal

① Stations must be improved as a comprehensive terminal.
By changing stations to a place where a new life is satisfied, PKP must make a new departure as a transport system.

② Stations must be equipped with necessary facilities as a node to other transport modes.
Railways perform transport composed of points and lines, which must be linked to two-dimensional transport modes.

At the Warsaw central station, for example, a passage must be constructed to connect it to the subway now under construction for extension. The tram arrival spot must directly be connected to the underground passage. The bus terminal spots must be categorized by destination to make it a terminal easy-to-use for passengers.

2) Future terminal functions

Base stations in major cities (to be reinforced) / Base stations in local cities (to be improved) / Intermediate stations in urban areas (to be improved)

① Outline

<Left> Automatic ticket vending machines, high-speed reservation ticket selling terminals, an automatic public address system and other systems and machines must be introduced.

<Center> Automatic ticket vending machines and reservation ticket selling terminals must be introduced to modernize management.

<Right> Automatic ticket vending machines for short-distance travels must

immediately be introduced.

② Size of station

<Left> Central stations in cities with a population of 300,000 or over

<Center> Central stations in cities with a population of 50,000 or to 300,000

<Right> Intermediate stations for urban transport

③ Number of stations

<Left> Twelve stations including Warsaw Cent, Gdansk, Pozan, Krakow and Katowice.

<Center> About 140 stations including Radom, Kazalin, Opole, Olsztyn and Rzeszow

<Right> About 150 stations in Warsaw, Gdansk Poznan and Katowice areas.

Other stations must be rationalized to large extents, unmanned or abolished, or their duties must be contracted with outside organizations.

5.10.2 Inter-city Transport Company

Given the geographical conditions of Poland (with major cities distributed at distances from 100 to 300km and international trains running through), railways are more advantageous than cars and airplanes and can attain self-subsistence, if services have been improved at higher management efficiency. It is necessary, however, to reduce the burden of track rental charges by exempting railways from the payment of capital costs or part of maintenance costs.

For this purpose, the following polices must be promoted.

(1) Establishing a High-speed Train Operation System

1) High speed

A key point of time-servicing railway business is to raise train speeds. To strengthen the competitiveness of railway, major cities must be connected within three hours. Those currently in a three-hour range must be connected in two hours.

To do this, sections where the train speed is limited must be eliminated in urban areas and dwell times at stations must be reviewed.

The following are measures to cut the operation times between major cities.

① Warsaw – Poznan

This section is being improved to run trains at 160km/h. Trains must connect the two cities in two hours and 30 minutes to reinforce the competitiveness with other

transport facilities.

② Warsaw – Gdansk

It is planned to introduce pendulum rolling stock that can negotiate curves at high speeds to connect these two cities in two hours and 40 minutes.

③ Warsaw - Krakow, Katowice

High-performance rolling stock for 200km/h operation must be introduced to connect Warsaw and the two cities in two hours through the new central trunk line.

④ Warsaw - Lubin, Lodz

As the distance is less than 200km, advantages of railway cannot be demonstrated. The operation time between Warsaw and the two cities must be cut by 10 to 15 minutes by improving the technique of train operation.

⑤ Warsaw – Wroclaw

The distance between these cities is longer than 400km. Trains are now covering this section in four hours or over. After implementing measures in (1) to (3), PKP must raise train speeds to connect the two cities in less than four hours as a next step.

2) Convenience

High-speed trains must be assigned with specific missions and categorized as follows.

① Type 1: EC and IC trains (with a maximum speed of 160 to 200km/h)

EC and IC trains must be operated between cities in a range of 200km or over and between cities and sightseeing spots. EX trains must be replaced with IC trains to establish a high-speed train operation network.

② Type 2: Express trains (with a maximum speed of 120 to 160km/h)

Express trains must be operated for short distances (less the 200km) to connect different regions.

To cope with requirements of business and sightseeing passengers, equal-headway operation diagrams (pattern diagrams) must be introduced. IC trains must have non-reservation seats so that passengers can easily use these trains. In important sections with high transport demands, at least a train must be operated every hour.

The following Table shows the number of trains in major sections.

Table 5.10.1 Present and revised number of trains in major sections.

(Number of trains in one direction)

Case	Section	EC	IC	EX	Express	Total
1	Warsaw~Poznan	2 (4)	2 (10)	4 (-)	- (-)	8 (14)
2	Warsaw~Gdansk	- (-)	2 (14)	8 (-)	- (-)	10 (14)
3	Warsaw~Krakow	- (-)	3 (11)	6 (-)	3 (3)	12 (14)
4	Warsaw~Katowice	1 (1)	5 (11)	3 (-)	1 (1)	10 (13)
5	Warsaw~Lublin	- (-)	1 (6)	1 (-)	6 (4)	8 (10)
6	Warsaw~Lodz	- (-)	- (6)	- (-)	8 (4)	8 (10)
7	Warsaw~Wroclaw	- (-)	- (4)	3 (-)	2 (2)	5 (6)

(Note): The figure in ( ) shows the revised number of trains

3) Comfort

High-speed train operation requires comfortable rolling stock with high-level accommodations that are an important element to attract more passengers to railways.

① Rolling stock for EC and IC trains

For sightseeing passengers, group passengers and families, compartment cars must be preserved. At the same time, however, non-compartment cars must be introduced for business passengers. To correspond to the improved living standard, basic passenger services must be improved by introducing air conditioning systems and improving dining cars, wash-basin facilities, doors, seats, illumination and other facilities. An average load factor of 70% must be aimed at.

② Rolling stock for express trains

Present IC cars must be remodelled and appropriated to express trains. Cars must basically be the non-compartment type. One of the lavatories installed at the front and rear ends must be remodelled as seats to increase the transport capacity and cut maintenance costs. An average load factor of 65 to 70% must be targeted.

(2) Sales Promotion and Marketing System

- Railways must offer a set of travel services easy-to-use for passengers and systematically provide information required by passengers.
- To improve the front service for passengers, ticket windows must be remodelled to the open counter type.
- * To invite more sightseeing passengers, campaigns for sightseeing must be promoted further.

(3) Improvement of Business Efficiency

To improve management, one of the most important subjects is to review personnel costs. The number of employees must be adjusted to work loads. Employees at ticket windows must be reduced by introducing automatic ticket vending machines, for

example. Introduction of a sufficient number of automatic vending machines will also eliminate queues before ticket windows as a means of improving passenger services. Simple ticket selling work must be performed by machines, while employees devote themselves to dialog with passengers and jobs for which high-level knowledge and experience are required.

5.10.3 Urban Transport Companies

Ever-increasing cars have posed serious problems such as chronic congestion on streets, shortage of parking lots and pollution by exhaust gas at city centers. This provides urban transport companies with an important mission from social viewpoints. Railways that are now suffering from deficits must raise transport demands by improving convenience of rail transport and stabilize their management by concluding contracts on transport with autonomous bodies in urban areas. For this purpose, railways must do the following.

(1) Improvement of Train Operation Systems

To attract more passengers to railways, trains must be operated at least at headways of 10 minutes during peak hours and 20 minutes during the daytime around base stations (high-frequency operation at equal headways with trains of short composition).

Actual measures to be taken in major urban areas are as follows.

① Gdynia (with a route length of about 80km)
In the Gdynia area, trains are now operated according to a complete pattern diagram. Passenger services will be improved by introducing new rolling stock and operating trains of short composition.

② Warsaw (with a route length of about 450km)
Trains must be operated at high frequencies in the radial seven directions. Rapid service train operation must be offered to long-distance commuters.

③ Katowice (with a route length of about 190km)
In this area with a high-density population, high-frequency operation must be performed during peak hours, in particular.

④ Poznan (with a route length of about 380km)
As this area is promising in the future, the train operation diagram must be revised to meet the needs of passengers (during peak hours)

Regarding the car accommodations, lavatory, seat and illumination facilities have superannuated. Rolling stock must be renewed for sections with high transport demands first. To smoothen boarding and detraining movements of passengers, box

type seats must be replaced with long seats. This also enables cutting the number of cars in a train-set and costs of rolling stock. The load factor over a whole day must be set at about 70% to improve transport efficiency.

(2) Sales Promotion and Marketing System

To increase railway passengers, PKP must establish a through-travel system with other transport modes by selling tickets common to other transport facilities, such as subways, trams, buses and others.

(3) Improvement of Management

Into stations where 70% of tickets sold are for short-distances, automatic ticket vending machines must immediately be introduced to rationalize and modernize management.

5.10.4 Local Transport Companies

PKP must determine to abolish or maintain local lines where railway transport is not advantageous, through negotiations with autonomous bodies along these lines. To maintain a local line, it is required to implement revenue increasing measures, improve efficiency and stabilize management by entrusting operation to autonomous bodies along the route through contracts.
For this purpose, PKP must do the following.

(1) Policies to Secure Revenue

To increase not only users along the routes but also sightseeing passengers from other districts, PKP must hold sightseeing events in conjunction with autonomous bodies to vitalize communities and railway transport businesses.
PKP must adopt train operation diagrams to meet local conditions and passenger needs, trigger transport demands by selling shopping tickets, discount tickets for the daytime and holidays and other event tickets, and promote other sales compaigns closely linked to communities.

(2) Improvement of Management

To improve the efficiency of employee rotation, field organizations must be integrated as far as possible. This will establish a cross-division linkage between employees and implant consciousness of "My railways."

Except in sections in local cities where transport demands are comparatively high, short-composition one-man rail buses with long seats must be introduced. The driver must take the duties of conductor. An average load factor of about 70% over a whole day must be aimed at.

5.10.5 Schedule to Improve Passenger Services

Above measures to improve passenger services must be implemented according to the schedule in the following

Table 5.10.2 Schedule to improve passenger services

<table>
<tr><th>Period</th><th colspan="3">Passenger transport sector</th></tr>
<tr><td>1997
-
1998</td><td colspan="3">・ Introduction of new passenger cars and improvement of accommodations of rolling stock.
・ Introduction of automatic vending machines into stations in urban areas.
・ Extension of ticket selling time and elimination of ticket-less passengers by blanket ticket inspections.
・ Introduction of non-reservation seats on inter-city superior trains.
・ Introduction of common tickets valid for railways, trams, buses and subways in urban areas.
・ Introduction of discounted event tickets, such as daytime shopping tickets, coupon tickets and discounted round trip tickets for urban and local lines.
・ Promotion of subcontracting duties or unmanned operation of small local stations.
・ Introduction of rail buses into local lines.</td></tr>
<tr><td>1999
-
2000</td><td colspan="3">(In addition to the above, the following measures must be promoted.)
・ Automatic public address and signposting systems into major stations in urban areas.
・ Remodelling closed ticket counters to open ticket counters.
・ Improvement of station plazas to facilitate transfer to trams and buses in major cities.</td></tr>
<tr><td></td><td>Inter-city transport company</td><td>Urban transport company</td><td>Local transport company</td></tr>
<tr><td rowspan="3">2001
-
2002

2003
-
2005</td><td colspan="3">(In addition to the above, the following measures must be promoted.)</td></tr>
<tr><td>・ Increasing the frequency of equal-headway train operation between major cities.
・ Increasing sightseeing demands by publishing sightseeing brochures on the spots along railway lines, and advertising through TV broadcast and tying-up with travel agents.
・ Cutting scheduled speeds to less than three hours between major cities in 400km zones through hardware and software means</td><td>・ Introduction of rapid service trains to cut the travelling time of long-distance commuters.
・ Increasing the frequency of train operation and operating trains at headways of 10 to 15 minutes in the morning and evening, and at headways of 20 minutes during the daytime.</td><td rowspan="2">・ Operation of sightseeing event trains in conjunction with autonomous bodies along railway lines to invite more passengers to railways.
・ Improvement of operation efficiency by training employees on multiple functions for different jobs including duties of conductor.</td></tr>
<tr><td colspan="2">・ Remodelling stations in major cities as comprehensive terminals incorporating hotels, shopping centers and restaurants</td></tr>
</table>

5.11 MANAGEMENT OF FREIGHT TRANSPORT

5.11.1 Basic Concept

In the future, PKP must undertake self-subsistent management as a privatized company, and compete with domestic and foreign business promoters while a policy of open access is implemented. To play its assigned role under such circumstances, PKP is required to make efforts for management and improvement in regard to the following.

First, provisions must be made before privatization so that the newly born freight transport company will not be subject to heavy financial burdens.

① Replacement and modernization of facilities and rolling stock that have deteriorated or superannuated due to insufficient investment.

② Removal or layout change of facilities that have deteriorated or become excessive or inefficient in freight and shunting yards as a result of decreases in the volume of transport. This will recover soundness of facilities, help optimize the allocation of employees and cut maintenance costs.

③Scrapping excess freight cars, which must desirably beperformed prior to privatization.

Second, it is important to implement measures to improve the transport system before and after privatization to make a new departure toward a reborn transport organization, since the current marketing and transport systems of PKP still preserve an air of the age when railways monopolized transport businesses as pointed out above.

Third, it is required to drastically rationalize the employment structure to attain a low-cost transport system, in order to strengthen the competitiveness of the railway as a process (system) industry.

Fourth, PKP must establish a system to smoothly perform door-to-door transport so that it can survive a new age of severe competition and make a new departure from the existing marketing system that is limited to on-rail transport alone. To do this, PKP must improve transport and marketing systems as a comprehensive physical distribution promoter, by positively addressing the operation and management of off-rail transport and cargo handling at terminals that make a joint between on- and off-rail transport by itself or through affiliated companies.

Fifth, fares must elastically be set after privatization in consideration of profitability to retain and increase customers under severe competition with other transport facilities.

Finally, it is required to strengthen the function of each division, clarify rights and responsibilities, expedite decision-making, introduce a group system, dynamically rotate employees and simplify the organization of railway companies.

The following are actual measures to be taken by newly born railway companies.

5.11.2 Freight Transport Railway Company

The privatized Freight Transport Railway Company must have functions of transport company in a new age and offer services to correspond to customer requirements. For this purpose, the company must constitute a management system and take measures to improve transport to satisfy customer needs, as explained below.

(1) Organization and Management as a Private Company

One of the largest differences between state-owned and private companies is whether they have cost consciousness. The government-owned PKP who was predominant in the market has brewed cost consciousness among employees only in the past ten years when the volume of transport rolled down. To maintain self-subsistent management in the future as a private company, however, it is essential that PKP promote businesses with the management responsibility clarified through the following measures. First, the management organization of each division must be strengthened, with due rights and responsibilities assigned. Second, the hierarchical organizational must be flattened to expedite decision-making. Third, a group system must be introduced into the organization for dynamic rotation of employees. Fourth, the head office must concentrate itself into policy-making with rights and responsibilities largely assigned to the top management in each region.

(2) Scope of Business

Although its business scope is not restricted at present, PKP is actually performing transport business alone. After it has been privatized, PKP must determine articles of incorporation as the fundamental rule of a privatized company, based on which businesses must be promoted.

Articles of incorporation will stipulate the freight transport business, businesses to develop railway transport and related businesses. In the ever-changing business circumstances, however, currently promising businesses may decline in the future. To cope with such changes, companies must not rest in peace in the existing businesses, but are required to always invest human and material resources in potentially promising business fields. As the stability and development of companies are maintained only by such diversified business promotion, articles of incorporation normally cover a wide range of purposes and related business categories.

(3) Concentrated Freight Marketing and Transport System

The widely-spread transport network and distribution of stations at present don't suit a physical distribution system in an age when competitors have mushroomed. Sections and freight handling stations that have lost importance must be abolished or rationalized as far as possible. Unprofitable lines must be shut down. As a first step, it is appropriate to scrap sections with low transport density, about 7,000km in length, which have been judged as unprofitable by IBRD, as the volume of transport within these sections is as small as 600 million tons.

Among the existing 1,800 stations, there are a number of freight handling stations with small loads. Those handling only 30,000 tons per year, or a volume to barely fill a freight car a day, must be abolished. The volume handled by these stations is only 2% of the total transport volume of PKP.

Abolition of these sections and freight handling stations can be compensated for by improving base stations for the physical distribution in each region and off-rail transport systems.

(4) Improvement of Transport System

About 80% of the total volume of transport of PKP are commodities for which railways can fulfil its inherent characteristics, and 75% involve yard-to-yard transport to make distribution of freight yards indispensable.

Freight yards require a large number of employees and consume much time in relaying freight cars. While abolishing unprofitable lines and freight handling stations in the future, PKP must abolish freight yards or reduce their size and switch the conventional transport style to a direct transport system as far as possible, in order to ensure rapidity and cut transport costs.

In implementing direct transport, however, it is not necessarily easy to collect fully-loaded freight cars to compose a train for one destination. In such a case, it will be necessary to compose a train with cars for two to three destinations for semi-direct operation. It makes another subject for discussions how to effectively utilize lands produced by abolishing freight yards or reducing their size for the purpose of performing express freight train operation.

(5) Improvement of Terminals and Other Facilities

To develop direct train operation, it is required to improve terminals in a wide range and supporting off-rail transport systems. Arrival terminals must be improved for

bulk cargos. Except in the case of point-to-point shuttle operation, bulk cargos normally start from one consignor at a departure terminal and are distributed among different consignees at different arrival terminals. When an arrival base is allocated to each region, however, cargos can directly be transported to arrival bases from the departure terminal. This system, which has been applied to coal, petroleum and cement, must be expanded to cover fertilizers, agricultural products and other commodities that can be collected in quantities in each region. These arrival bases will also have multiple functions for goods distribution and storage to expedite utilization of customers.

Container transport is ideal for general cargos. As containers are used for miscellaneous items and industrial products, they can be transported directly between terminals, if terminals have been improved. This must be promoted by the complex freight transport company. For other commodities that don't suit this system, terminals must be set at the center of regional physical distribution to improve the efficiency of transport.

In the process of transformation to a market economy, problems due to delayed off-rail transport systems are already surfacing. To correspond to the abolition of medium- and small-scale freight handling stations and unprofitable lines, truckers must be assigned at major stations, as an internal division or as an affiliated company of the new freight transport company, to integrate transport by rail and road.

At other stations, cooperation with existing truck transport companies must be strengthened..

(6) Elastic Application of Fare System

To promote business as a private company in severe competition with other transport facilities, it is important to elastically implement the following measures, in order to stabilize and increase customers.

- Fares contracted on long-term bases
- Fares for regular and repeated mass transport
- Round trip fares
- Fares for door-to-door transport
- Incentive fares to compete with other transport facilities

To shift customers to the direct base-to-base transport by improving base stations for physical distribution referred to above, while abolishing unprofitable lines or integrating small and low-density stations, it is effective to implement discounted "base-to-base fares."

In implementing such a system, PKP should check the profitability by a train-wise cost

calculating system.

(7) Promotion of Rationalization Measures

As a market economy develops and competition with other transport facilities intensifies, it is important like two wheels of a wheel-set for business promoters to ensure revenue by maintaining the volume of transport and cut expenditure.
Measures to rationalize freight transport include abolition of lines, freight yards and shunting bases, integration of freight handling stations, and cutting the number of shunting locomotives, among which the most effective measure is to abolish or reduce work loads of freight yards that have a large number of employees.
Some of 12 freight yards and 212 shunting bases currently distributed over the entire railway network must be abolished or their work loads must be cut by keeping pace with abolition and rationalization of local unprofitable lines and the shift to direct transport. The layout of these yards and bases must also be changed or scaled down. The present interlocking system must be replaced with a relay interlocking system to modernize train operation and shunting work in freight yards.

(8) Promotion of Affiliated Businesses

Promoting affiliated businesses and setting-up of off-rail transport companies to strengthen terminal functions will play a vital role in the future to back up the operation of railway business.
Businesses related to freight transport include the following.

①Operation of railway in highly-industrialized zone ...Constructing and operating regional railway lines for concentrated companies and perform freight transport and freight car shunting of these companies on contract to smoothen freight transport and improve its efficiency. ...(Regional railway companies, freight car shunting companies, etc.)

②Facilities and operation of freight terminals ... Strengthening the terminal function to store and handle cargos, in order to smoothen rail transport, acquire stable customers and expedite their use of railway. ... (Railway warehouse companies, commodity-wise terminals, etc.)

③Off-rail transport service ... Transport between stations and consignors to smoothen off-rail transport and related businesses. ... (Forwarding agencies, etc.)

④Other businesses ... Car parking business, other businesses operated by the railway company, land leasing to affiliated companies)

Among the above, the most important measures are strengthening terminal functions and businesses related to off-rail transport with respect to marketing, and setting-up of freight shunting companies with respect to rationalization of employment.
These measures involve investment. Except when railway companies have sufficient funds to promote these businesses by themselves, it is normally the case that they are promoted as affiliated businesses with common investment by customers and related industries, in order to increase and stabilize the use of railway transport. It should also be considered to make investment in kind It should also be considered to make investment in kind or offer lands in possession. Such affiliated businesses also effectively absorb excess employees who are discharged as a result of above-mentioned rationalization measures.
In the case of Japan Freight Railway Company, for reference, the revenue from affiliated businesses accounts for 35% of the total. About 30% of the employees of these companies are those retired or dispatched from the Company.

5.11.3 Complex Freight Transport Company

The complex freight transport company is required to implement a transport system far more advanced than the existing system to allow exploring and inviting new miscellaneous cargos to railway, in addition to those related to the existing transport system.
Miscellaneous cargos best suit the direct transport from origin to destination, by containers, trailers on flat cars or a dual mode system, among which containers are most convenient in terms of transport costs and universality between domestic and international transport.
The volume of miscellaneous cargo transport of PKP is estimated to be 34 million tons, or 15% of the total. At present PKP is transporting only two million tons of these cargos, or only 1%, by containers. Therefore, PKP will be in severe competition with other transport facilities in the future. It is required for PKP to maintain and expand the volume of container transport by taking drastic measures. Although container ships are now seen at Gdynia and Szczecin ports, they are mostly small RORO ships to accommodate only 500 containers. In 1995, a system successfully started to dispatch containers in the evening from Gdynia port and deliver them in the next morning to consignees in 10 major cities in the country. As a result, it is said, the share of marine container transport increased from 10% to about 30% at Gdynia port.

Containers are also flowing into the country from Hamburg port in Germany and Rotterdam port in the Netherlands, and Brest in Belarus and Ostrava in Czech through on-land routes. As a market economy develops, demands for container transport will increase.

As complex transport is also developing in neighboring countries, recording 10.7 billion tons or 22% in France and 12.1 billion tons in Germany or 18%, this is a promising business in the future.

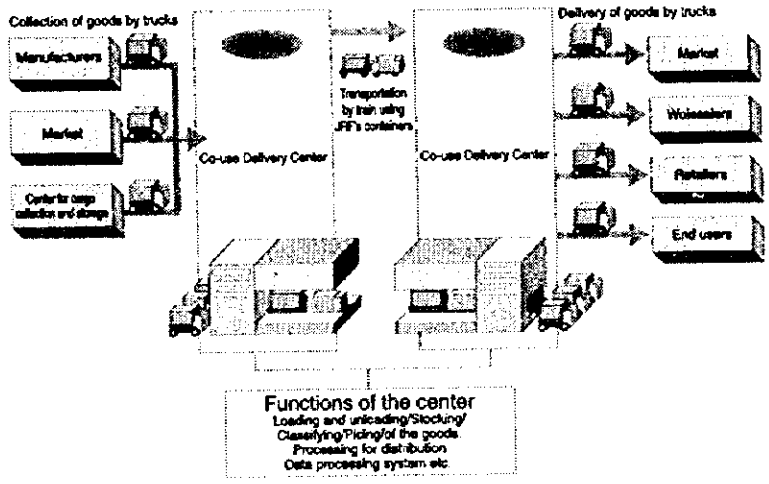
To implement complex transport, the following measures must be taken, in addition to those for the freight railway transport company referred to above.

(1) Improvement of Container Terminals

Candidate stations for container handling among major stations in the country and improvement measures may be discussed based on the physical distribution in the future. Anyway, the Warszawa central station is the most promising station for this purpose.

This station, which is located about three kilometers to the west of Warszawa city center, is now handling containers (transport to and from Gdynia by SPEDCONT company) and bulk freights. Although the loading/unloading sites (except that for containers) are devastated, they are large enough. As the station is located at an ideal place in the international city of Warszawa, it will contribute to qualitative and quantitative improvement of freight transport and physical distribution in the Warszawa zone, if functions for handling, distributing and storing international containers are improved to deserve an international railway physical distribution center, in parallel with implementation of rapid international and domestic transport services.

(Conceptual drawing) Railway physical distribution center with multiple functions



To develop container transport for door-to-door direct transport, it is essential to improve on-rail and off-rail transport systems simultaneously. Therefore, off-rail transport must be promoted directly by the complex freight transport company or its affiliated company.

(2) Improvement of Inter-city Rapid Freight Transport Network

For miscellaneous cargos transported by containers, the arrival date and time must be clarified. To maintain a dominant share in the domestic market in particular, cargos between major cities in the country must be collected in the evenning and delivered in the next morning. To do this, a rapid transport service comparable with that for passenger transport must be started between cargo handling bases.

(3) Improvement of Rolling Stock for Rapid Transport

To implement above services, PKP must improve freight cars to serve the purpose and high-speed locomotives for freight trains. Details including the number of cars and locomotives may be determined based on surveys of physical distribution in the future.

(4) Improvement of Marketing and Transport Information Network

To cultivate demands for transport of high value added commodities including miscellaneous cargos, rapidity, reliable transport and information services are indispensable. PKP, who is now marketing container transport and providing information on transport though telephone, must improve the system to offer information to customers for booking, marketing, transport and prediction of arrival date and time, in order to satisfy the needs of customers.

5.11.4 Schedule of Freight Transport Improvement Measures

Table 5.11.4 summarizes the schedule of the above freight transport improvement measures.

Table 5.11.4 Schedule of freight transport improvement measures.

<table>
<tr><th>Period</th><th colspan="2">Freight transport Divisions</th></tr>
<tr><td>1997
-
1998</td><td colspan="2">1. Modernization and replacement of superannuated facilities and rolling stock.
2. Optimization of facilities by reducing the layouts of low-efficiency freight yards and shunting bases.
3. Scrapping excess rolling stock.
4. Promotion of transport improvement measures ...Polarization of distributed freight handling stations, and improvement of the transport system and freight terminals.
5. Promotion of modernization measures ... Review of working systems at freight yards and shunting bases, and introduction of a relay interlocking system into station compounds.
6. Discussion of railway-related business categories and business contents to be promoted.</td></tr>
<tr><td>1999
-
2000</td><td colspan="2">In addition to the above items 1 to 5, promote the following.
11. Improvement of freight terminals and abolition or scale-down of freight yards and shunting bases to keep pace with the abolition of low-density lines.
12. Integration of nationwide power and maintenance divisions to freight transport divisions.
13. Improvement of complex facilities of the Warsaw freight terminal for promotion of related businesses and incorporation of off-rail transport companies.</td></tr>
<tr><td></td><td>Freight railway transport company</td><td>Complex freight transport company</td></tr>
<tr><td>2001
-
2002
2003
-
2005</td><td>In addition to the above items 1, 2, 4 and 5, promote the following.
21. As a privatized company:
・ Scope of business ... Articles of incorporation → Determination of business
・ Management organization ... Roles and authorities of the head office, branch offices and field units.
・ Management philosophy and policies ... Playing the role of a comprehensive distribution promoter to satisfy customer needs by keeping abreast of the movement of physical distribution.
・ Assets possessed ... Determining assets and improving the efficiency of control and operation.
22. Adoption of management policies
・ Elastic application of fare systems
・ Establishing a method of assessing revenue and expenditure by introducing a train-wise cost calculating system.
23. Positive promotion of related businesses
Strengthening functions of major freight terminals(improvement of complex facilities)
Improvement of the off-rail business system at major freight terminals (incorporation of companies)</td><td>In addition to the above items 1, 4, and 13, and items 21, 22 and 23 in the left column, promote the following.
31. Setting up railway physical distribution centers at freight handling stations in major cities.
32. Establishing rapid service freight transport networks to connect physical distribution centers for international and domestic railway transport.
33. Introduction of high-speed locomotives, container cars and containers to cope with expanded complex transport.
34. Improvement of selling and transport information network.</td></tr>
</table>

6. COMPREHENSIVE PROPOSAL

Railways have been playing an important role in Poland, to transport passengers and affluent underground resources by utilizing the network spread to every corner of the country. As motorization has progressed in an stagnated economy in recent years, however, railway businesses are now suffering from decreases in the volume of transport in adverse circumstances. To develop as an attractive railway with self-subsistence in the future, PKP must undergo drastic management innovation.

The issue of restructuring PKP has been addressed by PKP itself and a survey was also conducted with the funds of World Bank. Nevertheless, there are a number of structural problems in the nationalized organization. To recover normalcy of PKP's finance, it is inevitable to discuss the possibility of privatization.

Based on the experience in privatizing Japanese National Railways, we aim at supporting the privatization of PKP in this study and analyzed the issue of privatization in Chapters 3, 4 and 5 in this report.

We offer below a comprehensive proposal for the privatization of PKP.

6.1 PROPOSAL FOR THE PLAN OF PRIVATIZATION

Subjects to be discussed, implementation plans and proposals for the privatization of PKP are summarized as follows.

(1) Management Form

We recommend to divide PKP into the following privatized companies.

① PKP must be divided into two entities, i.e., an infrastructure sector company and a transport sector company, with excess assets held by the former.

② The transport sector will be divided into the passenger transport, freight transport and related business divisions, all of which will be controlled by a holding company, transfered from PKP.

③ Passenger and freight sectors will further be divided step by step into different companies for inter-city transport, urban passenger transport, local line passenger transport, freight transport and complex freight transport.

④ As the management form, a special nationalized company will control these companies in the transit phase, which will eventually become a stock company.

⑤ Finally, PKP will become a holding company (stock company) consisting of an infrastructure company and eight other companies (three passenger companies, two

freight companies, a related business company, an information telecommunication company and a data processing company).

(2) Plans toward Privatization

① We recommend to take the following measures toward privatization.

1) Preservation of Railway Transport

For public transport services including bus services, the Law on Local Autonomous Bodies was enacted in 1990 to clarify the responsibility of local autonomous bodies. To preserve local lines, the government, local autonomous bodies and railway enterprises are required to negotiate the operation of these lines based on contracts between railway enterprises and local autonomous bodies. To offer transport services that meet the needs of communities, it is also necessary to discuss a system to entrust the responsibility of inter-city transport service to local autonomous bodies or local Self-governing organizations.

2) Environmental Preservation

Railways are an environment-friendly transport system. Railways must be utilized more, therefore, to prevent environmental deterioration due to increasing automobiles. Railways must educate employees on the importance of environmental preservation, increase specialists in environment divisions and expand the existing environment monitoring system. Energy-saving must further be promoted. Hazardous materials must not be used in investment projects. Contractors must be trained on environmental preservation. Measures for the aged or handicapped must be improved. Railways must continue sustainable development, while taking into consideration environmental preservation measures in neighboring countries.

3) Fares

To improve the financial situation and prepare for privatization, PKP must increase revenue by raising fares. As the inter-city passenger transport is elastic in regard to operation time and services, fares may be raised by offering better services including higher scheduled speeds. As urban transport is less elastic against values, whether fares may be raised must be discussed as a policy on transport. In freight transport, charges for coal, which are suppressed at low levels, must be raised. Systems of discount fares and complimentary tickets must be abolished or scaled down.

4) Separation of Assets

The infrastructure sector must be separated as a new nationalized company. Field units of maintenance divisions must be privatized, self-subsistent ones first, to

compose a system to lease them to employees or strategic investors. Excess rolling stock must be scrapped. Lands and buildings must be disposed of on a long-term basis by qualified experts of management and development.

5) Treatment of Low-density Lines

In this study, we set a criterion on the abolition of lines in terms of passenger transport density and freight transport density, and determined that it is desirable to abolish 153 lines with a total length of 5,000km. To do this, understanding and cooperation of communities are essential. It is recommended, therefore, to set up an organization to consult and agree with local autonomous bodies, determine procedures for abolition and discuss complementary transport means based on the proposal in this study.

6) Treatment of Excess Employees

The number of employees required for the infrastructure, transport and related business divisions in 2005 is estimated to be 160,000. This means that 71,000 employees out of the present 231,000 employees will become excessive. For these excess employees, an early retirement system must be offered, while transferring some to related business companies simultaneously. Conditions for early retirement must desirably be offered step by step with different programs. To staff each division with an appropriate number of employees, those in marketing in passenger divisions must be transferred to freight marketing divisions or to complex transport divisions.

7) Related Businesses

Related businesses, which will further develop in the future, must be promoted by an independent organization with the business of immovable property as a core. With the cooperation of external experts, businesses that seem viable must be separated first. Start business first in the vicinity of railway stations and then evolve it to city centers. Advertising and other businesses in station compounds are preferential, as they are highly profitable, but don't require initial costs much. Invest capitals not only in new businesses but also in companies related to PKP. Success depends on human resources. Send employees to specialist companies to make them acquire expert knowledge.

8) Investment

Given the present status of superannuated rolling stock and ground facilities of PKP, funds must be invested more than ever before PKP is privatized. Locomotives and EMUs must be renewed and automatic ticket vending machines must be introduced for passenger transport. Locomotives must be renewed and container cars must be increased for freight transport. Funds must be invested in the infrastructure to improve tracks, introduce a CTC system and modernize signal and

telecommunication facilities on a preferential basis. We propose to the government to additionally invest two billion PLN (400 million PLN per year) into infrastructure divisions before PKP is privatized.

9) Subsidies by the Government

Subsidies by the government must be determined in consideration of the finance of the government, necessity to assist PKP and compatibility with EU directives. The balance between revenue and expenditure of PKP and its estimates in the future suggest that subsidies by the government are still required for passenger transport and investment in the infrastructure in the future. It is desirable that the investment in the infrastructure be assisted with a sum of two billion PKP in five years. The effects of subsidies must be analyzed on a regular basis

10)Upbringing Human Resources

PKP must prepare training programs for newly introduced technologies. Employees must be rotated between different work places. PKP must attach importance to the development of expert knowledge. Overseas training programs must also be considered. For the personnel affairs management system, job rules and a capability-base salary system must be adopted. Extra pays must reflect the business achievement of the organization and be linked with merits of individual employees. PKP must discuss introduction of extra pay systems for multi-function and transfer to different work places.

11)Management of Passenger Transport

It is required to improve inter-city train operation to effect rapidity, convenience and comfort and strengthen selling and marketing systems, in order to promote positive business management. For urban transport, a high-frequency, eaqual-headway and fixed-composition train operation system must be established in conjunction with other transport facilities in urban areas. It is important to improve the efficiency of local lines by efficiently rotating employees and introducing rail buses.

12)Management of Freight Transport

For ordinary freight transport, PKP must abolish or reduce the scale of low-density stations and freight yards to switch cargos to direct transport, improve terminals and strengthen the link with road transport agencies, review the distribution of yards and shunting bases to cut the number of employees, and apply fare systems elastically. For complex freight transport, PKP must improve container bases at Warsaw and other major stations, organize affiliated companies to smoothen off-rail transport, clarify arrival date and time and increase container cars.

②Institute reforms for privatization in phases, as shown below:

Proposal for privatization plan

	First stage (1997 to 1998)	Second stage (1999 to 2000)	Third stage (2001 to 2002)	Fourth stage (2003 to 2005)	Fifth stage (after 2006)
Promote privatization Divide the organization and assets	• Divide the PKR organization into an infrastructure sector, passenger transport sector, freight transport sector, power and maintenance sector, and other business sector. • Change the name of real estate business to related business. • Excess assets held by PKP will be transferred to the infrastructure sector. • Organize an employee investment fund (SIF) and grant stock options to employees. • Organize a Committee for Privatization of PKP within the Ministry of Transport. • Reinforce the organization of the Railway Bureau, Ministry of Transport. • Organize a Privatization Promotion Project Team within PKP.	• Separate the infrastructure sector from PKP and integrate the power and maintenance sector into the passenger transport and freight transport sector. • Organize the Public Service Contract Fund (PSC). Transfer a portion of the rail access change to the fund and allocate it to the passenger transport sector as assistance. • The accounts of maintenance work in infrastructure, passenger transport and freight transport sectors will managed by each sector in preparation for a shift to a self-supporting accounting system and an independent company. • The principle sectors of related business will be concentrated into related business, telecommunication and data processing sectors by integration, transfer and abolition.	• Reorganize PKP as a special nationalized company in which the government holds all stocks, and divide the passenger transport and the freight transport sectors into three passenger transport sectors and two freight transport sectors. • Allocate 15% of the stocks of PKP after it has been reorganized as a joint-stock company to the SIF. • Divide the maintenance work in the infrastructure, passenger transport, and freight transport sectors into independent businesses, starting with a business that is able to adopt a self-supporting accounting system.	• Change the special nationalized company that was formerly PKP to a holding company, and set up three companies in the passenger transport sectors, two in the fright sectors, and three in related business as independent companies. • The holding company sells stock of each of the eight independent companies to strategic investors and releases stocks by listing on the Stock Exchange.	• Change the infrastructure company to a special nationalized company, then promote privatization by listing stocks on the stock market. • When the infrastructure company is sold, the charge for selling it will be transferred to the PSC found. The PSC will utilize the working capital as a financial resource. • Release stocks of the holding company itself to the stock market. • SIF allocates stocks to employees (including retired employees) in exchange for stock options.
Scrap low-density lines	• Select lines to be scrapped in the first stage, and set up a supporting legal framework. • Create preferential tax and subsidy systems for the lines to be scrapped. • Reach agreement with local governments on supplementary modes of transport. • In the first stage, the aim is to scrap a total length of approximately 1,600 km of line.		• Select lines to be scrapped in the second stage and reach agreement with local governments on lines to be scrapped. • Examine the income and expenses of supplementary modes of transport for lines scrapped in the first and second stages and review the subsidy system. • In the second stage, the aim is to scrap a total length of approximately 3,400 km of line.		• Examine the income and expenses of supplementary modes of transport and review the subsidy system.
Treatment of Excess Employees	• Introduce an early retirement system for three years from 1999. • Expand the business of related business, telecommunication business and data processing business, and accept excess employees. • Transfer personnel to adjust for the imbalance in the volume of business between regions and industries.		• Develop measures for excess employees to be instituted continuously through the first and the second stages, aiming at total employment of 160,000 by the end of 2005.		
Develop related business	• Prepare a plan for inviting and training talented personnel, and rotating personnel. • Promote marketing in stations and advertisement business.	• Develop business using subsidiaries and create a system to dispatch all employees on loan to subsidiaries for about three years in principle. • Foster core companies for each industry and promote direct privatization, such as lease and sales companies, to employees and strategic investors.		• Enlarge and reorganize operations through M&A activities with specialist external companies and by setting up joint ventures. • Develop hotel management and shopping center businesses by taking advantage of stations in prime locations.	
Facility investment	• Invest in modernizing infrastructure and greater speed. • Invest in automation and save labor to reduce the number of personnel required.				• Plan and promote facility investment based on the original measures of the infrastructure company, three passenger transport companies and two freight transport companies.
	• Improve accommodation of rolling stock for passenger transport, upgrade freight cars. • Purchase rail buses.	• Investment in modernizing rolling stock plant. • Scrap depreciated rolling stocks and purchase new rolling stocks and rail buses.	• Purchase rapid transit passenger trains, rapid locomotives for compound transport, container cars and containers.	• Invest in remodeling main stations for passengers and freight terminals. • Continue investment such as upgrading rolling stock.	
Government subsidies	• Continue with subsidies that the government currently assigns to PKP (passenger transport subsidy: 571.5 million PLN; investment subsidy: 400 million PLM)				
	• Accept additional investment from the government for the infrastructure sector for five years from 1998 (400 million PLM per annum, for a total of 2,000 million PLM).				
Developing human resources	• Further expand PKP's system of personnel training. Introduce new equipment, prepare new training programs that can respond to the new technology, and enable employs to acquire experience in operations in principle sectors through rotation, and training to acquire expert knowledge in marketing and other areas. Introduce an overseas training system for executives.				
	• Prepare business regulation for each occupational category to enable an objective evaluation of operating results. • Review the bonus system for each occupation and examine the introduction of a merit-based salary system.		• Introduce a bonus system and salary system determined based on the results of companies, occupational category, departments, and individuals as an independent company. • Introduce an allowance for mobile businesses and transfers to remote locations.		
Management of passenger transport	• Introduce automatic ticket vending machines at city stations. Increase the hours of operation of the ticket office. • For small stations in provinces, promote subcontracting for stations and increase the number of unmanned stations. • Sell discount tickets, such as tickets for shopping, ticket books and round-trip tickets. • Introduce a system for automatic broadcasting and guides at principal stations. • Upgrade the ticket office from a closed counter to an open counter.		• Inter-city transport companies increase the number of trains and create schedules with regular intervals and take both infrastructure- and service-related measures to shorten time. Expand tourist demand. • Urban transport companies increase the number of trains and create schedules with regular interval. Have both rapid trains and local trains to shorten the time spent on long-distance commuting. • Provincial transport companies improve business efficiency by giving employees multiple abilities and allowing them to play multiple roles concurrently. • Remake main stations as comprehensive terminals that incorporate hotels, shopping centers and other facilities.		
	• Secure income by rethinking the discount fare system from 1998.				
Management of Freight Transport	• Eliminate inefficient freight yard and shunting bases and promote appropriate use of PKP equipment. • Allocate freight stations selectively and set up a freight terminal • Promote rationalization by reconsidering the operating system at freight yards and shunting bases. • Set up multipurpose equipment at freight terminals in Warsaw and establish a company for off-rail transport.		• The freight railroad transport company introduces a fare system, such as a fare for long-term contracts, and operate the fare system with flexibility. Prepare a freight terminal and off-rail transport system. • The compound freight transport company prepares a basis deal with containers, rapid fright transport network and an information network for sales and transport. Service the Warsaw central freight station as a railroad physical distribution center and use it as the primary base for handling containers.		
	• Ensure income based on abolishing the policy of fare regulation from 1998.				

6.2 ORGANIZATION TO PROMOTE PRIVATIZATION

To implement the privatization plan referred to in the previous section, it is essential to obtain cooperation and understanding of labor and management, assistance by the government and cooperation of those concerned. It is also important to ensure transparency of privatization processes and establish a consensus among people for privatization. To positively and steadily promote the privatization of PKP, we propose to set up or strengthen the following organizations in the government and PKP.

(1) Committee on the Privatization of PKP

In the Ministry of Transport, organize a Committee on the Privatization of PKP (Privatization Committee) composed of members from related Ministries and other governmental organizations, representatives of companies who have experienced privatization, specialists on privatization who have expert knowledge and executive members of PKP, to discuss basic policies on privatization and prepare basic plans.

Under the Privatization Committee, organize three Sub-committees on assets, excess employees and local lines.

The Sub-committee on assets will identify assets possessed by PKP, separate excess assets and those for railway businesses, discuss methods of selling excess assets, plan distributing assets between newly born railway companies.

The Sub-committee on excess employees will plan and coordinate smooth re-employment of excess employees.

The Sub-committee on local lines will plan abolishing low-density lines, transferring transport business to bus or other transport facilities, and shifting management to local autonomous bodies.

(2) Reinforcing the Railway Bureau, Ministry of Transport

The Railway Bureau, Ministry of Transport, who is the actual secretariat organization for privatization of PKP, have 13 members including a director. As new jobs have already arisen after the Railway Transport Law was enacted, the Bureau must be reinforced to deal with jobs related to the privatization of PKP in the future.

(3) Privatization Promotion Project Team

Organize a privatization promotion project team directly under President, with managers and staff of Strategy Restructuring Bureau and other divisions, to support the

Privatization Committee and prepare detailed implementation plans for privatization.

6.3 RESPONSIBILITY OF THE GOVERNMENT

To develop the economy of the country, it is essential to improve the basis of transport. As railways are an environment-friendly transport means with high energy efficiency, free from exhaust gas or other contaminants, it is an important policy of the government how to vitalize railways. The privatization plan summarized in this study requires efforts of PKP and assistance by the government. In this regard, we propose the following to the government.

(1) Financial Assistance

One of the purposes of the privatization of PKP is to cut subsidies by the government. As seen in other countries, however, there are few privatized railways that are operating without requiring financial assistance by respective governments. Railway management should be vitalized based on appropriate financial means including subsidies for passenger transport and additional investment into the infrastructure.

(2) Excess Employees

It is an important subject for the government how to deal with excess employees in the process of PKP's reform. As this a socially important issue involving problems that cannot be solved by PKP alone, the government must extend support to measures taken by PKP including the early retirement system and re-employment in other industries.

(3) Low-density Lines

To abolish low-density lines, it is important to obtain understanding and cooperation of community people who tend to oppose abolition of railway lines. It this study, we have proposed to abolish lines to a total length of 5,000km by the end of 2005. To implement this proposal, the government must intervene in coordination between PKP and local autonomous bodies, and consult with local autonomous bodies on the funds required to abolish lines or operate preserved lines.

(4) Regulations to Protect Public Interests

An age when railways monopolize transport businesses has gone with their responsibility to protect public interests diminished. Therefore, regulations on fares for public interests must be minimized. When the government imposes economic burdens on railways as a public service, the costs involved must be compensated for by the government.

6.4 RESPONSIBILITY OF PKP

To overcome severe competition in transport markets and vitalize railway management, drastic measures must be taken including changing the management form.
PKP must acquire the constitution of private companies to demonstrate vitality and efficiency, and is expected to address the privatization plan proposed in this study with all members from the top to the rank and file. We also propose to take the following measures toward privatization.

(1) Cooperation with Privatization Committee

PKP's positive cooperation is expected with the Privatization Committee that will be set up in the government, by submitting data required for discussions in the Committee, for example.

(2) Cooperation between Labor and Management

To attain successful privatization, it is essential to obtain cooperation of labor unions. Labor and management must exchange opinions, establish a fiduciary relation and cooperate with each other for the development of their organization, or a target they share in common.

(3) Reform of Consciousness

In nationalized railway organizations, both labor and management tend to lose consciousness of the financial status of the organization, morale to improve productivity and consciousness of operation costs. Before it is privatized, therefore, PKP must make employees have the consciousness seen with workers of private companies, and a morale to increase revenue, cut expenditure and develop themselves. Spirit of devotion must also be introduced. To do this, PKP must improve training systems, have lectures on management by external instructors, make employees

experience working for private companies, encourage tool box improvement activities, participation in workplace opinion forums and contribution to workshops on field study results, and introduce a capability-based personnel management system.

(4) Improvement of Corporate Constitution

As a merit of privatization, the newly born railway organization will be able to attain self-subsistent operation through free and positive business promotion under clarified responsibility for management. The private railway company must drastically bias itself to a profitable management and business fields where the advantageous features inherent to railway transport are unsparingly demonstrated. This requires new conception, such as introduction of talented human resources from outside, selection and preferential treatment of capable and development-oriented employees, decentralization of authorities for personnel affairs and financial management and establishment of an organization with duties and responsibilities clarified.

(5) Modernization of Railways

A purpose of privatization is to improve productivity by using modern facilities and equipment and performing efficient management. To do this, the new railway organization must take measures for modernization, such as appropriate investment, mechanization, systematization and utilization of external capabilities, promote marketing to offer attractive products and services, implement minutely designed policies to reflect local conditions, develop diversified businesses and pursue modernized management incorporating information systems.

6.5 CORRESPONDENCE TO EU POLICIES

(1) EU Policies on Railways

As the Polish government intends to become an EU member, the management of railways must take into account EU's universal policies on railways, whose basic principles are ① autonomous management, ② sound finance, ③ competitiveness of railways, ④ separation of infrastructure sector and transport sector, ⑤ opening railway networks to third parties, and ⑥ contracted local line services. In addition, EU wants to improve high-speed railway networks in Europe, plans to open a cross-European railway freight freeway, intends to raise the standard on railway

infrastructure, and requires to open the infrastructure to third party countries.

(2) Responsibility of the Government

In 1997 July, the Polish government enacted the Railway Transport Law to separate infrastructure sector and transport sector. The Law also clarifies the investment by the government into lines that are important for the nation. The government's policy that is now providing subsidies to PKP with compulsory public services assigned must be changed to one that reforms PKP as a competitive self-subsistent organization. The government is also required to take the initiative in promoting measures for local lines in different regions, raising the standard on railways and investing funds in modernization projects.

(3) Responsibility of PKP

As a result of integration of the markets in EU, railways in Europe are becoming internationalized, border-less and liberalized. In Poland, an age when PKP monopolized and operated railway networks is now a thing in the past. A free access system will be introduced in the railways in Poland, in which railway promoters in other countries will make their debut. In an age of competition, PKP must reform its corporate constitution and transform itself into a privatized and vitalized organization to demonstrate corporate features specific to private companies. Improvement of railway networks in Europe, on the other hand, will accelerate international transport and trigger transport demands for PKP. Therefore, PKP must improve the infrastructure and rolling stock for international transport, strengthen cooperation with neighboring countries for through-operation and raise the passenger service level.

6.6 CONTINUATION OF SURVEY AND IMPLEMENTATION OF TECHNICAL COOPERATION

In this study, we surveyed methods of privatizing PKP and major issues related thereto, based on the experience in privatizing Japanese National Railways. To pursue actual measures for privatization in detail, it will be effective to further survey the following, and introduce technical cooperation from other countries.

(1) Continued Survey Items

1) Comprehensive survey to develop railway-related businesses
   Surveying business chances including determination of their order of implementation, and methods of planning businesses, marketing, management and control, personnel affairs management, development, and raising funds for different business categories including operation of station buildings.
2) Survey of detailed implementation items for privatization of PKP
   Surveying procedures to establish new companies, enactment and revision of related laws, and the status of assets including methods of disposal, planning assignment of employees, and calculating the amount of capital and the stock price to prepare for privatization.

(2) Technical Cooperation

PKP is recommended to request dispatching experts for technology transfer from Japan or other countries who have experienced privatizing nationalized railway organizations.

1) Inviting experts
   Receive experts in related businesses, personnel affairs management, raising funds, stocks and management and control.
2). Sending employees for training
   Send employees in charge of related businesses and so on to other countries to acquire expert knowledge and technologies.
3). Development surveys
   Request development surveys by experienced countries in related businesses and other special fields.
4) Introducing technologies from privatized railway companies
   Obtain information on management know-how after privatization form Japan Railway Companies (JR group) or other privatized railway organizations on a commercial basis.

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