

## CHAPTER 9 PKP INTERCITY

### 9.1 PRESENT SITUATION AND ISSUES

#### (1) General

Motorization is reducing the share of railway transport. Railways will not be able to maintain the same level of passenger volume if it continues to provide service at the present levels transport speed. Accordingly, it is imperative that the train speeds be improved if the same level of transportation volume is to be maintained.

The vertical separation of PKP presents the fundamental problem of the system itself. The railway is a system-integrated industry. The vertical separation was done as for the sake of survival, but it has resulted in sub-optimal operation.

PKP Intercity was established in September 2001 as operator of Eurocity, Intercity, Express trains and some Night trains. It operates over a limited route network, providing frequent (generally regular-interval) trains over the four main routes and more restricted service on a number of others.

In 2002, some 8.9 million journeys were made by the company's services, representing 3.1 billion passenger-km. International traffic accounts for less than 10% of the company's business.

This company has the role of creating a new age for PKP passenger transport through the operation of high-speed trains on selected lines.

Increasing motorization is the main cause of dwindling share of railway transportation and this casts shadows on the PKP Intercity operation too.

Furthermore, the company faces the problem of extended journey times due to infrastructure maintenance backlogs as well as the competition that will arise from highway construction and potentially from EU open access beginning next year.

Future prospects of PKP Intercity are uncertain and its future role is under discussion.

But it is clear that the role of the company is important for the improvement of the total PKP Group and for the society of Poland because the high-speed railway lines and the road network can be combined harmoniously by a PKP Intercity high-speed program.

#### (2) Operational behaviour

The traffic data cover 4 months in 2001 and the complete year of 2002. The transportation volume is indicating a hesitation caused by following factors.

- a. High price of Track Access Charge (hereafter, TAC)
- b. The inefficiency of rolling stock rotation by the locomotive hauling system.

**ATTACHMENT 9.1.1****Trains on No. 300 line**

Train Number	Type	Train Number	Type
EC46	EuroCity	137	Fast
EC44	EuroCity	77207	Fast
EC40	EuroCity	17041	Ordinary
EC48	EuroCity	17131	Ordinary
IC1507	InterCity	17133	Ordinary
IC1601	InterCity	17135	Ordinary
IC1701	InterCity	17137	Ordinary
IC18403	InterCity	17139	Ordinary
IC2601	InterCity	E57521	Ordinary
IC1703	InterCity	76937	Ordinary
IC1603	InterCity	E131	Ordinary
IC1801	InterCity	133	Ordinary
IC1705	InterCity	139	Ordinary
Ex1811	Express	143	Ordinary
Ex1813	Express	E141	Ordinary
Ex1613	Express	331	Ordinary
Ex1713	Express	241	Ordinary
Ex1711	Express	E335	Ordinary
18701	Night Express L	243	Ordinary
15109	Fast	245	Ordinary
28101	Fast	E231	Ordinary
15119	Fast	E231	Ordinary
18109	Fast	E233	Ordinary
17103	Fast	235	Ordinary
246	Fast	5984	Ordinary
E77113	Fast	E2231	Ordinary
57103	Fast	E2233	Ordinary
77109	Fast	2235	Ordinary
77117	Fast	18207	Sleeper train
25103	Fast	344	Sleeper train
18503	Fast	1284	Sleeper train
17113	Fast	248	Sleeper train
135	Fast		

## CHAPTER 10 PKP CARGO

### 10.1 PRESENT SITUATION AND ISSUES

#### 10.1.1 Present Situation of PKP Cargo S.A.

PKP Cargo is the largest company in the PKP Group, and plays a key role in the development and maintenance of the railway system in Poland.

The organization is now facing both external and internal pressures – the external represented by depressed transport demand and the internal by the shouldering of significant amounts of excess and deteriorated assets transferred from the old PKP.

In this section, we take first a general view of PKP Cargo's condition through the following two aspects:

##### (1) Transport business aspect

The total transport volume handled by the old PKP and PKP Cargo has fallen in each year since 1985, with only some minor exceptions. According to forecasts of future demand, furthermore, the total volume for all transport modes in Poland is not expected to increase drastically over the next few years.

Even though hard coal, as a commodity providing over 50% of the total of rail freight traffic (on a ton basis), has been the mainstay of Polish railway freight transport, there is some uncertainty as to whether this situation can continue in the future.

Meanwhile, the country's EU accession will have important implications for the rail freight transport business in Poland, for which careful preparation is required.

A further factor to note is that the company earns significant amounts of revenue from the hire of locomotives and drivers to PKP Intercity and PKP Regional. Any downsizing of the activities of these two companies would thus pose a threat to Cargo's profitability.

The company faces growing competition, both from the development of road haulage and from the other licensed rail freight operators; there are currently 22 such companies licensed to operate on the PKP network, though the volume of traffic handled by them is not very significant at this stage.

Additionally, the company must face the threats posed by the Open Access implications of EU accession. Under the provisions of the accession agreements, 20% of the PKP main route network is subject to Open Access operation with effect from 01 May 2004, and the whole network from 01 January 2007.

In general, competition from road haulage is likely to become fiercer over the coming years as the country's road network develops. The company needs to take full advantage of the comparatively slow pace of this development.

In summary, PKP Cargo has to be prepared to undergo substantial change in the near

future.

## (2) Internal company issues

At the present, PKP Cargo possesses a substantial amount of deteriorated and redundant assets, as well as surplus employees, transferred from the old PKP at the time of commercialisation. These give rise to low productivity and increased cost, even though PKP Cargo gained a profit from business activity in its first full year, 2002.

Meanwhile, sluggish demand and commodity changes in the transport demand will affect the company, as mentioned above. Therefore a fundamental change of direction is required within PKP Cargo, aimed at turning the organization into an integrated logistics company able to compete in European and other countries.

In order to re-structure the company's management and business systems, especially with regard to improving the condition of deteriorated assets transferred from the old organization, some governmental assistance may be required, through taxation, regulation or subsidy as appropriate.

Under these circumstances, PKP Cargo will need to reform its management and sales systems while it is still supported by a comparatively stable transport volume of hard coal.

In particular, PKP Cargo has obtained a transition period until 31 December 2006 before accepting in full the international freight transportation system regulated by the Trans-European Rail Freight Network (TERFN) through EU Directive 12. However, it is expected that many foreign freight carriers will seek to enter the Polish market sooner or later, so that PKP Cargo will have to take positive action in order to survive in cooperation and competition, with them while competing with other freight transport modes.

### **10.1.2 Marketing Aspect**

Legislation covering the activities of the company places some restrictions on its ability to act commercially, in particular with regard to its capability to refuse unprofitable traffics. Such restrictions no doubt arise from a situation in which PKP was virtually a monopoly carrier; in the competitive environment outlined above, this is surely no longer the case.

#### **10.1.2.1 Traffic Analysis**

The company carries some 60% of its traffic on a trainload basis, and thus has a considerable ongoing involvement in provision of service for single wagon loads. The proportion of trainload traffic is said to not to have increased substantially over recent years.

For the year 2002, a broad analysis of the company's total tonnage carried (155.0 million tonnes) shows the following split of carryings:

- 58% domestic freight

- 27% export
- 12% import
- 3% transit.

Export traffic is divided approximately equally between freight hauled to a port for transshipment to ship, and that forwarded by rail wagon throughout. The large majority of import traffic crosses a land frontier.

A significant proportion of non-bulk carryings is handled by PKP Cargo through the medium of forwarders. The company regards its relationship with forwarders as being generally positive, in particular because it provides an assurance of prompt payment; on the other hand, it does make understanding of the end customer's requirements more difficult.

While much of the traffic carried is on a siding-to-siding basis, PKP Cargo does offer a full door-to-door service for clients without siding facilities. The company does not have its own road fleet, but contracts with a number of transport companies to provide the road collection and delivery element.

#### **10.1.2.2 Tariffs and Pricing**

In common with all the licensed rail freight operators, the company is obliged by law to have a published tariff and regulations, which are in the public domain. There is, however, substantial freedom to depart from the published tariff, which the company views as purely a "starting point" for client negotiation.

At the same time, the company has at all times to pay close regard to the requirements of the Competition Commission, which seeks to ensure that "identical" clients are treated on an identical basis. Staff negotiating with customers have to be very aware of the implications of this.

The company believes that it has a "price leadership" role in the freight market, with road operators tending to set prices at a level slightly below the published rail tariffs. The company is, however, in general confident that its quality of service enables it to command a slightly higher price – even where no use is made of the flexibility that exists within the tariff structure.

#### **10.1.2.3 Marketing Structures**

Sales and customer service work with respect to major customers is undertaken by commodity-based teams, belonging to the Headquarters organisation, and located close to the customers whom they serve (the coal team, for example, is based in Katowice).

The sales/customer service teams report to the Commercial Director, and are supported by centralised teams, reporting to the same Director, covering such areas as:

- \* Marketing and customer services
- \* Marketing planning and analysis.

Smaller clients are dealt with through the network of 23 regional offices. In practice, around 75% of the company's total tonnage is forwarded by companies covered by the Headquarters teams.

### **10.1.3 Trend of Freight Traffic**

#### **(1) Total Freight Traffic**

According to recent trends in domestic transport volume in Poland, all transport modes have been showing downward trends, and forecasters are reporting that no increases in demand in Poland can be expected over the next few years.

Table 10.1.1 shows the volume of freight traffic handled by each transport mode from 1990 to 2001.

Comparison of the total traffic tonnage in 1990 with that in 2001 shows a decrease of 328 million tones, approximately 20%. In the same period, railway transport volume fell by 115 million tones, or approximately 40%.

Over the same period, road transport, as the main competitor to rail, has also dropped by 220 million tones. However, the extent of the decline for road is lower, at only 17%.

In terms of ton-km transported, the total has decreased by 27% from 1990 to 2001; by this measure, rail traffic dropped by 43% but road traffic increased by 85%. This is because average length of haul for road traffic has doubled over the period, while that for rail traffic has remained static.

On a tonnage basis, market share calculation for each transport mode in 2001 shows 12.7% by rail and 81.4% by road, as against 17% by rail and 78.5% by road in 1990.

#### **(2) Railway Freight Traffic**

##### **1 ) Past Trend of Traffic by PKP and PKP Cargo**

Table 10.1.2 shows traffic trends from 1996 to 2002 for rail freight transport. The five principal commodities, which between them provided more than 76% of PKP Cargo's tonnage in 2002, are highlighted in this table.

The table shows that traffic has been fallen in every year except 1997. Even though hard coal is the predominant sector, with over 49% of total volume in 2002, this also shows a descending trend year by year.

Although several major commodities show the same level of decline that for coal is naturally most serious in tonnage terms.

It should be noted that these major commodities, including hard coal, are considerably influenced considerably by Government policy, so that there may be cause for concern about coal traffic decreasing further due to the national energy policy.

Against this descending tendency of total traffic by rail, freight carried by combined transport systems has been showing a gradually increasing trend.

Currently, PKP Cargo classifies its freight carryings by 19 commodity categories, which include combined transport and transit cargo. In Table 10.1.2, these are included in the "Other Commodities" category. These traffics are expected to continue to increase gradually.

**Table 10.1.1 Past Traffic Volume**

Traffic Volume (Mln ton)						
	1990	1995	1998	1999	2000	2001
Total	1,646	1,381	1,359	1,329	1,348	1,317
Railway	282	225	206	187	187	167
Road	1,292	1,087	1,077	1,068	1,083	1,072
Pipeline	33	33	41	43	44	45
Marine	28	26	25	23	23	22
Inland Waterway	10	9	9	8	10	10
Traffic Volume (Bn ton km)						
	1990	1995	1998	1999	2000	2001
Total	346	301	317	311	283	253
Railway	84	69	62	55	54	48
Road	40	51	70	70	73	74
Pipeline	14	13	18	19	20	21
Marine	207	166	166	164	134	109
Inland Waterway	1	1	1	1	1	1
Average Transport Distance (km/ton)						
	1990	1995	1998	1999	2000	2001
Total	210	218	233	234	210	192
Railway	297	307	299	297	291	287
Road	31	47	65	66	67	69
Pipeline	421	405	453	453	459	466
Marine	7,284	6,382	6,549	7,220	5,869	4,839
Inland Waterway	106	94	117	123	112	123

(Air freight traffic has been ignored.)

Source - Annual Report of PKP, PKP Cargo and Public statistic book of Poland (GUS). Figures quoted are totals for all rail freight operators.

Table 10.1.3 shows the ratios of traffic on domestic and international transportation. International traffic also shows a generally declining trend; however, there is reason to expect that this trend will be reversed, especially for transit traffic, due to the geographical location of Poland on major East-West and North-South freight corridors, and also to the country's impending accession to the EU.

Thus it is essential to undertake aggressive expansion of the international (combined) transport system as quickly as possible, while the existing major commodities such as black coal remain broadly at their present level, and especially so as not to fall behind road transport against the background of anticipated road network development in the country.

**Table 10.1.2 Past Trend of Railway Freight Traffic – PKP CARGO**

(Mln ton)

Freight product	Year						
	1996	1997	1998	1999	2000	2001	2002
Hard coal	109	108	95	88	82	80	76
Stone, sand, gravel	19	20	17	19	18	13	13
Metals and metal products	16	18	16	13	14	12	11
Oil & Oil products	12	13	13	14	13	12	11
Other chemicals	9	10	9	9	9	9	8
Other commodities	59	58	56	44	47	39	37
Total (Million ton)	224	227	206	187	184	163	155
Billion ton-km	68	69	62	56	53	46	45
Average Distance of haul (km)	306	303	299	297	288	282	290

Source - Annual Report of PKP , PKP Cargo and Public statistic book of Poland (GUS)

**Table 10.1.3 Freight Traffic by Category – PKP Cargo -**

(Mln ton)

	Year						
	1996	1997	1998	1999	2000	2001	2002
Domestic	147	146	127	119	114	99	90
Export	55	48	49	46	40	41	42
Import	23	25	27	23	24	19	18
Transit	6	6	5	4	5	5	5
Total	224	227	206	187	184	163	155

## 2) General Condition of PKP Cargo in 2002

In this section, transport business matter of PKP Cargo is focused briefly since the financial aspect of the company is given a detailed account in the other section of this report.

As shown in Table 10.1.4, the operating income amounts PLN 5,923 million and the revenue, PLN 375 million by transport volume, 155 million ton in 2002.

Unfortunately, some data of property owned by PKP Cargo have not been gathered in this report.

## 3) Forecast of Traffic Volume

According to analysis on freight transport demand which is described in this paper, total demand shall be increasing slightly in comparison with result of 2001, whether in pessimistic or optimistic one until 2010. As shown in Table 10.1.5, however, demand of railway freight transport is forecasted as very severe condition in the circumstances.



**Table 10.1.4 Specifications of PKP Cargo (2002)**

Item	Unit	Amount
Operation Income	PLN	5,923 Mln
Operation Cost	PLN	5,548 Mln
Operation Revenue	PLN	375 Mln
Net Profit	PLN	153 Mln
Transport Volume	Ton	155 Mln
Transport Work	ton-km	45 Bn
Train-km	train-km	73 Mln
Service Distance <sup>(note)</sup>	Km	18,550
Service Route <sup>(note)</sup>	line	405
Personnel	person	51,389
Rolling Stock		
Locomotive	car	3,816
Wagon	car	90,185
Leased Wagon	car	39,828

(note) Estimated by this paper

**Table 10.1.5 Freight Traffic Volume****PKP Cargo & Other Modes (Mln ton)**

Transport Mode	Year				
	2001	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Total	(100)	(100)	(100)	(100)	(100)
	1,317	1,351	1,400	1,334	1,403
PKP Cargo	(12.6)	(10.5)	(11.5)	(9.1)	(10.6)
	167	142	161	121	149
Others	(87.3)	(89.5)	(88.5)	(90.9)	(89.4)
	1,150	1,209	1,239	1,213	1,254

Table 10.1.6 shows commodity-basis traffic forecast for 2006 and 2010 in comparison with the result in 2002.

In this forecast, hard coal is decreasing surely in this period, especially in 2010 while other commodities are on the increase or levelling off. Therefore, it is very important to develop new commodities or general cargo rapidly while the rather huge bulk traffic is maintained.

Especially, even as railway freight transport it is required to aim at definitely tailor-made to meet the customer's preference: door-to-door and even just-in time transport to be involved in a manufacturing process.

**Table 10.1.6 Freight Railway Traffic – PKP Cargo**

(Mln ton)

Freight product	Year				
	2002	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Hard coal	76	63	71	52	63
Stone, sand, gravel	13	12	17	12	18
Metals and metal products	11	12	18	12	19
Oil & Oil products	11	12	12	12	12
Other chemicals	8	-	-	-	-
Other commodities	37	46	49	38	43
Total (Million ton)	155	142	161	121	149
Billion ton-km	45	42	45	35	41
Average Distance of haul (km)	290	296	280	289	275

In this table, total traffic (ton) summed up by each commodity is not equal to the total of each column because some part of the traffic by LHS is included in some commodities.  
Refer to the demand analysis in this paper in detail.

Table 10.1.7 shows railways role forecasted in domestic and international transport in the same period as that mentioned above by comparing with the result in 2001. Traffic in export drops in both pessimistic and optimistic estimations until 2010 at least.

This tendency occurs chiefly in international economic condition.

From this point of view, it is very indispensable to make efforts to develop domestic market for PKP Cargo. Furthermore, the same is also true for other categories through an intermodal system.

**Table 10.1.7 Freight Traffic by Category – PKP Cargo**

(Mln ton)

	Year				
	2002	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Domestic	90	76	99	66	96
Export	42	40	33	32	25
Import	18	21	24	18	23
Transit	5	5	5	5	5
Total	155	142	161	121	149

Inversion phenomenon between pessimistic and optimistic forecasts in the case of export appears in the analysis. That is why the larger traffic in export occurs in the total traffic that is smaller in each case, for example.

#### 10.1.4 Task of PKP Cargo

In this study, through discussions with PKP Cargo's staff, we recognized that the following are tasks to be performed urgently for accomplishing the privatization.

**Table 10.1.8 Four Major Tasks of PKP Cargo**

- |  |
|--|
| <ol style="list-style-type: none"><li>(1) Treatment of enormous deteriorated assets from the old PKP</li><li>(2) Cost reduction, TAC, Labor cost and Energy cost</li><li>(3) Productivity Improvement</li><li>(4) Market Development</li></ol> |
|--|

Moreover, these tasks have close relations with each other, so that we tried to indicate the correlation in a figure as shown in Table 10.1.9.

In order to study these tasks in detail, we tried to collect data concerned, which are shown in the margin of the table in cooperation with PKP Cargo.

Table 10.1.9 Major Tasks and Implementation Matrix

(Draft)

Special Feature Program

	MAIN TASKS				INCIDENTAL TASK		Remarks
	Marketing Development	Cost Reduction	Productivity	Treatment of Deteriorated facilities	Excess Personnel	Excess Assets	
Service Route	↔	☆ - Closing non-profitable line, yard	⇒	- Diversion or Disposal	↔	↔	Yard: 10 -> 5 Siding: 1600->240
Front (Station) System	↔	☆ - Eliminating non-profitable train	⇒	- Diversion or Disposal	↔	↔	
	↔	☆ - Closing front in non-profitable line	⇒	- Diversion or Disposal	↔	↔	
	↔	☆ - Closing non-profitable front	⇒	- Expanding sales area	↔	↔	
		- Wider booking system collecting container			↔		
		- Building track terminal and container terminal			↔		
		- Stenghening sales of transport			↔		
	☆	- Building up 8 logistic centers ⇒	⇒		↔		Absorbing 1,500 per./center
Transport System				- Outsourcing			
		- Grouping base station for setting wagon-load train ⇒	⇒				
		- Direct transport (yard-pass train) even for wagon-load ⇒	⇒				
		- Setting block train even for wagon-load train ⇒	⇒				
		- Introducing container train in stead of wagon-load ⇒ (Private container basis by client or forwarder)	⇒				"Ost Wind" "Ferry Train" for Sweden
	☆	- Introducing advanced transport system		- Providing long haul train due to efficiency			"SUW2000" for Lithuania "Jaroslaw" for Ukraine
	☆	- Introducing new information system ⇒					
Transport capacity and Target		- Evaluating capacity for load	⇒	⇒		⇒	While demand decreased
Facility & Rolling Stock				- Disposal of Needless facilities			
				- Rehabilitation of facilities			
				- Introducing new facilities			
			- Consolidating maintenance sites (workshop) into a few of sites ⇒		↔		Investment required
Personnel			☆	- Cancelling contract between passenger companies ⇒	↔		Influence on client companies
Relation with affiliated company				- Reviewing organization ⇒	↔		
	- Grouping PKP Cargo league			- Grouping PKP Cargo league			
				- Outsourcing saleswork and operation	↔		
Tariff							
Other action		☆ - Exempting taxation on fuel oil & other					
		☆ - Lightening burden caused by TAC					

(Study)  
Structure of taxation and amount accounted in total cost  
Amount of TAC accounted in total cost

(Study)  
Transport volume in each line (Present & Future demand)  
Traffic volume (no. of train) in each line (Present & Future demand)  
☆ Cost accounting system of train  
Earning rate for evaluating "profitable"  
Condition among PLK & Other carrier companies

(Study)  
Rolling Stock, facility  
Owner (Cargo, other carrier, client)  
Usage (freight, passenger)  
Condition (availability & Lifetime)  
Allocation

(Study)  
Handling volume each front  
(Cost shall be involved in train cost.)?

(Study)  
- Human Resource Allocation

☆ : Special Feature Program  
↔ : Negative influence  
⇒ : Positive influence

(Study)  
PKP Cargo's Management Plan  
Including Relation between PKP Cargo and LHS

## **10.2 POTENTIAL SOLUTIONS**

According to the long term transport demand forecasted by analysis in this report, the railway freight traffic is expected to decrease by 8% approximately in 2006 and 22% in 2010 against 155 million ton in 2002 in the pessimistic (lower) case. Under the circumstances, traffic of coal, the biggest bulk commodity in PKP Cargo, is dropping down to as much as 68% of that in 2002. Thus PKP Cargo is definitely required to reform the business methods radically by developing new commodities in order to maintain or increase the total traffic in domestic and international transport.

At the time PKP Cargo was split from the old PKP S.A. in 2001, meanwhile, the new organization accepted some redundant properties including excess personnel. From technical point of view, furthermore, some important jobs were all not transferred successfully. For example, making diagram of freight trains, PKP Cargo's products to meet freight customers' demand, was not transferred to PKP Cargo but to PKP PLK.

Furthermore, a huge number of drivers who handle locomotive, EMU and DMU even for passenger trains were transferred intensively to PKP Cargo. Therefore, PKP Cargo is forced to control huge number of drivers together with locomotives for passenger companies; PKP Regional and PKP Intercity besides its own business.

Regarding financial condition of PKP Cargo, the ordinary net profit was PLN 153 million as black in 2002. Through Poland's accession to EU in 2004, however, Polish economic condition shall be affected drastically by that of western countries, willy-nilly.

Furthermore, by negotiations with EU in opening Poland railway market to TERFN (Trans-European Railway Freight Network), a three-year transition act was settled in the second package involving EU Directive 12 specially for protecting PKP Cargo's business. In this scheme, international transport by foreign railways is forbidden by the end of 2006 except for transit transport in Poland. It means that railway freight transport market in Poland shall be opened completely at the beginning of 2007. Recently, it is reported that some railway freight companies have been reorganized in borderless international trade in the Western Europe. Under the circumstances, PKP Cargo is on the situation to have to accomplish all measures against severe international market as well as domestic by the time.

Therefore, it is a key for revitalizing PKP Cargo that has heavy burden as mentioned above to improve cash-flow by downsizing the enormous assets and by cutting down cost through productivity improvement. And it is also very important to encourage the present inner circumstance to make effort to develop new markets and clients.

### **10.2.1 Basic Conception of Solution**

In this section, the following are focused as major tasks in order to develop PKP Cargo for becoming a strong integrated logistic company and one of key companies among PKP Group.

Through the purpose of this study, that is, reform of Polish railways, these tasks should be clarified by making a distinction between PKP Cargo's own effort and the state assistance.

### (1) Revitalization of Freight Operation against Sluggish Demand

From the information we have already, it is clear that the challenges faced by the company arise from reduced traffic levels and the generally tight business environment. In the light of PKP Cargo's difficult business situation, it is essential to adapt conduct train operation closely to the transport demand, and to slim down fleets of rolling stock, personnel, facility, "left over" from the days of substantially higher traffic volumes.

### (2) Structural Reform

In order to compete effectively with road transport and other foreign railway freight operators, especially in the context of EU accession, there is a need to reform the internal structure of PKP Cargo and improve further the productivity of the organization through asset reduction.

Probably, some old business systems left behind the market developing rapidly might have caused the current lower work productivity. Raising staff's awareness of cost reduction is very important for the competitive business world.

Furthermore, PKP Cargo must also take the lead in developing a PKP Cargo "family group", involving also related companies and forwarders as well in order to establish an integrated and strong logistics organization.

### (3) Strategic Market Development and Investment

The company will need to ensure that it can establish a strong marketing position within those industries which are likely to develop most rapidly in the future – in particular those concerned with consumer goods. A wide range of services will need to be provided, either by the company itself or by partner organizations. Plans to establish a network of Logistics Centers form a part of this strategy, and will need to be progressed with some urgency.

Under the circumstances, it is indispensable to invest aggressively in intermodal transport systems, for which the company has been somewhat slow in making provision.

Given the right approach, PKP Cargo can achieve a strong position in the Polish freight transport market, especially while road transport that is struggling to develop against the background of the current slow development of the road network. The main issues to be resolved are how to provide a huge amount of the finance required, and how to grow the income from this field through aggressive marketing activity.

## 10.2.2 Procedure of Analysis

Downsizing of the organization is what should be given high priority in the above all measures for the re-vitalization.

In order to make an action plan for reforming the freight transport undertaking, it is indispensable to reveal the real condition of PKP Cargo as much as possible.

In this section, some procedures to know or analyze the current condition of the

organization through data we have been able to collect so far are explained first.

Furthermore, the most profitable or proper scale for PKP Cargo operation is estimated here.

#### (1) Cost and Downsizing

Generally, cash-flow analysis is essential for evaluating a business enterprise. It is a general principle that operation cash-flow generated from the railway business must cover the operation capital and investment in order to maintain the operation itself and then must enable the enterprise to pay back the debt or bond. According to cash-flow statement of PKP Cargo in 2002, the net cash-flow or free cash-flow is reported as PLN 86.7 million.

Developing PKP Cargo as an excellent company for ever needs the further improvement of this free cash-flow.

Since financial condition of PKP Cargo is analysed from another point of view in other part of this paper, some matters related directly with the business plan are focused here., that is, way how to cut down cost in order to improve the free cash-flow.

#### ( 2 ) Improvement from Reference scale

Since it is very difficult to evaluate the current operating condition precisely by a few data we have collected unfortunately, we attempt to grasp the situation as clearly as possible by the financial statement and statistic traffic data concerned.

Firstly as a starting point for studying, a reference scale should be set up from the present traffic volume and assets scale data such as the number of personnel, rolling stock and financial resources. After that, it can be started studying on how to reform or improve the present condition by basing on the reference scale and forecasted traffic demand in the future.

From this point, the condition can be calculated for reforming in both quality and scale through cost reduction and productivity improvement and so forth. This can be called here as a preparation process before formulating an action plan for the reform. At the same time, a hypothetical management base scale converted on the basis of the traffic volume in 2002 is formulated.

After that, a further new management scale is estimated for the end of 2006 and the end of 2010 as the short-term (Stage 1) and middle-term (Stage 2) targets. A point of time targeted on the end of 2006 means an epoch for opening Polish freight railway to TERFN.

We are using various kinds of data originated from PKP Cargo's activity in 2002.

There may be some opinions divided especially on whether or not the financial statement of PKP Cargo in 2002 shows the ordinary annual condition of PKP Cargo's management. However, there is no other choice but to utilize the data instead. It might be permissible to grasp on outline of PKP Cargo with some other data can be collected at least.

### 10.2.3 The First Downsizing from the Current Condition (Reference Scale)

In this process, a reference scale is established as mentioned above.

Some important factors should be explained here. Most of them can be brought out basically from differences between the traffic volume (ton and ton-km) in 2001 and that in 2002.

#### (1) Number of Personnel

At the time of PKP S.A. split at November 1, 2001, PKP Cargo accepted 52,754 employees. This number might have included some excess personnel because traffic volume and the former required staff number in 2002 had been estimated based on the situation of the organization before the commercialisation. Actually, traffic volume in 2002 dropped to 44.9 billion ton-km by over 10% from 49.9 billion ton-km.

Therefore, PKP Cargo may have received some 10% of the total number as excess personnel.

In this study, however, the number of excess personnel is estimated to be 7%, that is, 3,693 persons.

According to our calculation, the total number of personnel dropped naturally by 2,238 in one year from 52,754 to 50,516. The calculation result of the number of personnel in 2002, that is, 50,516, is explained in Table 10.2.1.

This means that number of excess personnel remaining among the total personnel of 50,516 is 1,455 persons ( $= 3,693 - 2,238$ ).

In the comparison with both traffic works in 2001 and 2002 on average with those of respective years, the actual traffic in 2002 dropped by 6.8% from the year before. So in this case, 2,927 persons can be estimated as excess personnel devised from categories except for the management shown in Table 10.2.2. The man-power in management division has little relation to actually decreased traffic volume, and the personnel in this sector should utilize their man-power to practical work for the future increase of development. For all practical purposes, of course, some members should be replaced anytime with strong willed recruits to promote the organization improvement the company, even though the total number is maintained.

One very important point should be stressed here. There are an extraordinarily large number of staffs belonging to the so-called management department or section. Some data indicate that 13.97% of the total number of personnel is working for this sector. (See Table 10.2.2)

Table 10.2.1 shows the relation of the total number of personnel and excess employees in 2002 and this becomes a reference scale of further estimation.



**Table 10.2.1 Reference Scale of Personnel**

(Persons)

	Reference Scale (2002 base)	Remarks
Total (2002)	50,516	Averaged from 2002 and 2003
Excess total	4,382	
Excess (1)	(1,455)	Remaining from the start
Excess (2)	(2,927)	Caused by dropped traffic volume in 2002
Personnel required	46,134	

Total number, 50,516 is estimated from average of numbers at the beginning of 2002 and 2003:  
 $(51,247+49,786)/2 = 50,516$ .

Table 10.2.2 shows the number of personnel categorized by job. As mentioned above, there are 4,382 excess persons included in the total.

**Table 10.2.2 Number of Employees (2002)**

(Persons)

Job Category	Ratio (%)	Number of personnel	Remarks
Management	14.97	7,562	Including unknown 1%
Operation	76.62	38,706	Sales, operation, etc.
Maintenance	8.41	4,248	
Total	100	50,516	

Ratio of each category shows the case in PKP Cargo.  
Number in each category is calculated for this paper.

The number of management staffs, 7,562 persons, who may have indirect relation with transport work dropped should be adequately reduced in the near future.

## (2) Rolling stock

### 1) Locomotive

Basically, the number of rolling stock, especially locomotives, required for operation is estimated in comparison with operation work data, that is, locomotive-km in 2002. However, the result indicates only a number of locomotives that are operated actually for service operation. Of course, we must calculate the number including stand-by or reserve locomotives for maintenance and emergency and the like.

The number of locomotives is estimated as shown in Table 10.2.3.

**Table 10.2.3 Number of Locomotives (2002)**

Type	2001	Reference Scale (2002 base)	(Car)
			Balance
Electric Locomotive	1,762	1,543	219
Diesel Locomotive	2,054	513	1,541
Total	3,816	2,056	1,760

As the result of estimation based on the operation data of 2002, the total number decreases drastically. In the case of diesel locomotives, three fourth of the existing cars are not in use, if the data are reliable. It might be caused by the stop of use of shunting locomotives due to many recent closures of marshaling and shunting yards. (One publication reports that 100 marshaling yards and 223 shunting yards were closed. Japan Railway & Transport Review 26, Feb. 2001)

Table 10.2.4 shows the number of locomotives chronologically. PKP has adjusted the total number according the transport volume. Since 1998, the total number has decreased by 596 locomotives until 2001.

**Table 10.2.4 Number of locomotive (Transition)**

	(Car)		
	1988 <sup>(1)</sup>	1998 <sup>(2)</sup>	2001 <sup>(3)</sup>
Electric Locomotive	2,301	1,940	1,762
Diesel Locomotive	3,892	2,472	2,054
Total	(100) 6,193	(71.2) 4,412	(61.6) 3,816
(Reference)			
Transport Work (Bn ton-km)	(100) 120.7	(51.2) 61.8	(38.5) 46.5

(1) World Bank Database (2003)

(2) Jane's World Railway 2002-2003

(3) Annual Report (2001), PKP Cargo

Locomotives used by LHS are not included in the number in 2001.

On the other hand, the further detailed data, such as those on the condition or lifetime of each locomotive have not been collected. Some information suggests that the average life time of rolling stock is around 21 years.

## 2) Freight Wagon

In the case of freight wagons, it is very difficult to properly estimate the number needed for the service because there are various kinds of wagons to meet the usage or commodities.

Fortunately, we received very clear data about freight wagons from PKP Cargo and some estimation can be guided from them.

Table 10.2.5 shows the number of freight wagons. Since 2001, PKP Cargo has

procured 3,816 cars. The increased number consists of 727 covered wagons (Type G1-H2), 2,564 open wagons (Type E5, F6) and 527 flat wagons with some wagons removed from the register. Table 10.2.6 shows breakdown data of the condition of wagons in 2003.

**Table 10.2.5 Number of Freight Wagons**

Category	(Car)	
	2001 <sup>(1)</sup>	2003 <sup>(2)</sup>
Freight Wagon (PKP Cargo)	90,185	94,001
Leased Wagon	39,828	Unknown
Total	130,013	-

(1) Annual Report (2001), PKP Cargo

(2) The latest data from PKP Cargo

**Table 10.2.6 Condition of Freight Wagons**

Total	(Car)			
	Under Service	Under Repair	Under waiting	For Scrap
94,001	61,150	4,297	16,860	11,694

Even though the detail data about other conditions of freight wagons have not been collected, the number of wagons needed for the service is estimated as 73,877 cars. This number is given by deducting wagons for scrap and half of cars under waiting repair.  $(=94001-11694-16860/2)$

### (3) Facility

In this paper, it is impossible to make estimation on facilities due to lack of data. However, the number of personnel concerned is estimated in comparison with traffic volume and so forth.

Through the study mentioned above, a reference scale can be formulated on the basis of the actual data of 2002 as shown in Table 10.2.7.

This index may not indicate clearly the current condition of PKP Cargo but it is enough to grasp an outline or tendency of the company to reform by sliming down or improving the productivity.

**Table 10.2.7 Reference Scale (Index)**

Item	Unit	Base Data (Result in 2002)	Reference Scale (Base on 2002)	Balance
Traffic Volume	Mln ton	155.1	155.1	-
Transport Work	Bn ton-km	44.9	44.9	-
Route Length	Km	18,550	18,550	-
Personnel	Per.	50,516	46,134	4,382
(Major Properties)				
- Rolling Stock	Car			
Electric Locomotive	Car	1,762	1,543	219
Diesel	Car	2,054	512	1,542
Total	Car	3,816	2,055	1,761
Wagon	Car	90,185	73,877	16,308
- Station				
- Marshalling Yard				
- Depot				
- Other				
Income	Mln PLN	5,923	5,923	-
Cost	Mln PLN	5,549	4,841	708
Profit (Loss)	Mln PLN	374	1,082	- 708
Rate of Profit		0.063	0.183	

#### 10.2.4 Cost Down

From this section, we will consider about cutting off the present useless or unnecessary works in the present through productivity improvement activity in order to cut down the cost

There may be various kinds of programs about improving the productivity in PKP Cargo.

In advance, we had some menus for the program of productivity improvement in Table 10.1.8.

However, it is very difficult to quantitatively analyze the current condition in detail due to a few data about sales activities.

Picking out some symbolic examples for remarkably cutting down the cost, therefore, we are going to analyse the present casual work method for effective improvement.

##### (1) Cancellation of a lease contract on locomotive and driver

Since the beginning, PKP Cargo has managed to control enormous number of driver for passenger railway companies besides its own operation.

At present time, however, PKP Cargo is in the situation to urgently build up high management efficiency, and so this company has to slim down the scale and concentrate its energy on its own business, that is, freight transport and development of new market in order to survive severely competitive freight transport business and

remain a key company among PKP Group.

Continuing the leasing business will cause the following other problems or risks to PKP Cargo.

- 1) Passenger companies may introduce further advanced rolling stocks including electric multiple units (EMU) with expectation for the future benefit. That will definitely cause excess locomotive to PKP Cargo management.
- 2) PKP Regional has huge tasks of unprofitable business especially in local lines. Through negotiation with the state and local governments the company might be split into further smaller companies. In some case, some lines of the current service area of PKP Regional may be closed due to various kinds of financial reasons. This will be similar to the risk to PKP Cargo as mentioned in the above item.
- 3) With regards to cash-flow, delay of payment from the customers will cause big troubles to PKP Cargo's management. According to the financial statement in 2002, PKP Cargo gained 10% of all income from the customers.
- 4) From brief analysis in this study, it becomes clear that the customers do not pay enough to PKP Cargo in the contract. Furthermore, the matter is what the loss becomes fainter and the negative condition is put out sight in the great mass of PKP Cargo.
- 5) As a potential matter, locomotives and drivers needed for passenger companies are controlled in the condition jumbled together with freight train operation. Under the circumstances, it is very difficult for PKP Cargo to improve operational productivity, for example, maintaining all the stand-by locomotives and drivers even for passenger companies has been shifted onto PKP Cargo's responsibility whether large or small.
- 6) For the time being, PKP Cargo is controlling drivers of EMU and DMU as well. In considering the technology transfer to these drivers for the future, it is very important for PKP Cargo to reconsider the leasing contract immediately.

In this process mentioned above, there are some secondary matters as follows. However, these should be discussed on how to resolve them among all the parties concerned including the state government.

- Treatment on assets like rolling stock, driver and facility to be left from PKP Cargo
- Ironing out the condition with labour union that must have strong objection against this plan.

Cancelling the leasing contract can cause some merit for PKP Cargo from the economical viewpoint.

Under some presupposition, the following result can be obtained.

This estimation is basically calculated by using data of locomotive-km of passenger and freight train in 2002.

Table 10.2.8 shows some assets including personnel that can be removed from PKP Cargo in the case of cancelling the leasing contract. So far,

**Table 10.2.8 Asset Removal**

Description		Amount	Remarks
	Driver	8,498	Incl: Administration
Personnel	Maintenance staff	690	
	Total	9,188	
	Electric Locomotive	472	
Locomotive	Diesel Locomotive	217	
	Total	689	
Depot		9	

On the other hand, Table 10.2.9 shows income and expenditure in the same case.

As shown in the Table, PKP Cargo will be able to improve balance between income and expenditure by cancelling the contract.

As mentioned above, this negative matter has been hidden behind huge amount of cost in PKP Cargo since the beginning.

PKP Cargo as a private company should never shoulder these burden absolutely, much less with other technical burden.

**Table 10.2.9 Income & Expenditure**

(Mln PLN)

Item	Amount
Income	633
Cost	
Depreciation	20
Material/Energy <sup>(note)</sup>	175
TAC	-
Outsourcing	228
Tax & Charge	-
Wage	296
Other	-
Total	707
Balance	- 86

(note) Estimated: Diesel oil has been involved in the lease contract.

## ( 2 ) Productivity Improvement (case-1)

There must be many potential menus (cost-down) that should have been improved in huge organization, generally. We study here about how to gain higher productivity by changing operation method of locomotives.

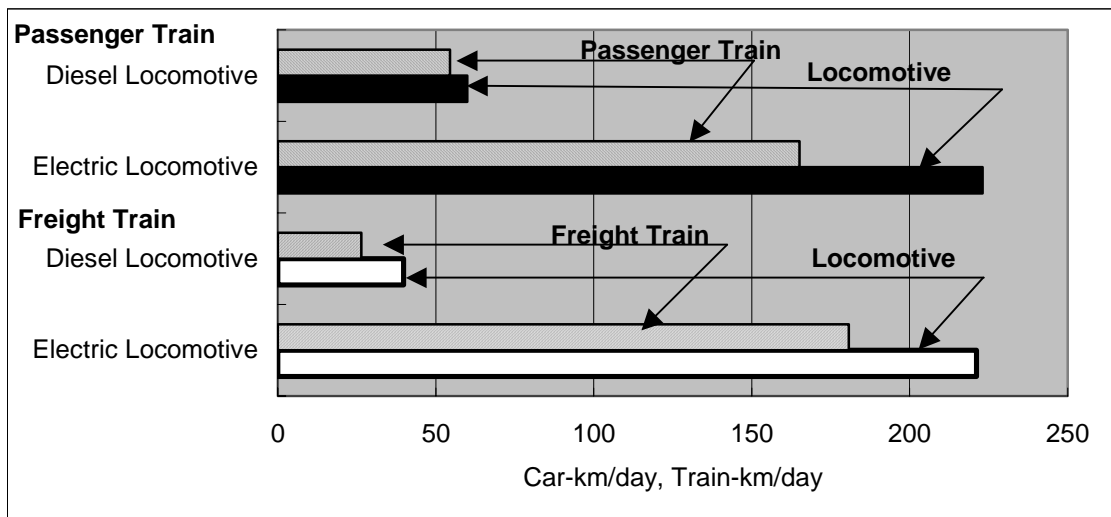
The following data in Table 10.2.10 is extracted from a PKP statistics document of

2002.

Fig. 10.2.1 indicates relation of train and locomotive that hauls it in operation.

**Table 10.2.10 Operation of Locomotive & Train**

Description			Freight Train		Passenger Train	
			Electric Locomotive	Diesel Locomotive	Electric Locomotive	Diesel Locomotive
(a)	Locomotive	Car-km/day	221.1	39.8	223.1	60.0
(b)	Train	Train-km/day	180.7	26.3	165.1	54.5
(a/b)	Ratio	%	122.5	151.5	135.1	110.0



**Figure 10.2.1 Locomotive & Train**

A careful comparison of the operation distances expressed in train-km/day shows that the average locomotive travels longer distances than it should, regardless of whether it is hauling passenger or freight train.

This is definitely natural in case of train hauled by locomotive because a locomotive has to go and come to the train position in stabling yard and depot for the haulage before and after operation service. But there must be some room to improve this condition. In the case of freight train that is hauled by diesel locomotive, especially, locomotive-km is far longer than train-km.

Exactly, diesel locomotives are used for shunting in yard, so that it has tendency to have longer single running in comparison with electric locomotives.

This data may include some running distance for shunting in the yard.

There must be another reason hidden behind this data. Since the beginning, operation company has never drawn its own operation diagram by itself. The operation diagram of each train has been established by PKP PLK. However, this diagram should have

been involved many important matters for operation company;

- 1) How to operate rolling stock and trains efficiently
- 2) How to control drivers efficiently and safely
- 3) How to operate trains economically
- 4) How to operate train service to meet client's requirement

According to some information, there has been actually many troubles occurred in the process of making up diagram before starting new operation service, so far.

Furthermore, even after opening the service, many people in PKP Cargo are forced to work more due to for troubles and it is doubtful whether the diagram prepared by the other organization is the best for its service, such as efficiency, economy, safety, human affairs and especially meeting the client's requirement.

Necessity of process change in drawing the diagram will be mentioned later in this section.

Under the assumption of PKP Cargo drawing its own diagram, some productivity improvement, that is, operating efficiency of locomotives and drives can be made by itself.

**Table 10.2.11 Efficiency of Locomotive Operation  
(Freight Train)**

	Electric Locomotive	Diesel Locomotive	Total / Note
Current Loco-km	221.1	39.8	260.9
Loco km / Train km	122.5	151.5	See Table 10.2.10
Improved Ratio	110.2	136.4	Improvement 10%
Improved Loco-km	198.7	35.8	234.5
Improvement Ratio			89.9%

In this simple estimation, some reduction on the current number of driver and locomotive can be expected as productivity improvement by considering the increase of working efficiency of locomotive and driver. Exactly, this doesn't mean that 10%-cut ratio of locomotive running against train affects simply and directly number of locomotive and driver to be dropped because of some (low) efficiency factor existing in operation works. Therefore, the number might be reduced by smaller ratio than the 10%.

#### ( 2 ) Productivity Improvement (case-2)

In the current freight operation, one fourth of number of freight trains is operated by a couple of drivers due to labor union's request.

It is unknown what the real reason behind the labor union's request is.

After discussing about how to maintain safety and working condition of driver with



labor union, it should be improved the productivity as a private company that is pointing toward a strong freight transport firm in the competitive world.

Simply, number of drivers can be cut down drastically by considering the present working efficiency of driver.

### **10.2.5 Service Distance Scale of PKP Cargo**

Let's consider profitable or appropriate operation service distance (km) for PKP Cargo's management. Figure 10.2.3 shows relation between the service distance and other factors that are referred from the result of PKP Cargo's activities in 2002. This graph may indicate some macro tendency of the management rather than the real situation because the data gathered from PKP Cargo are very few, unfortunately. It is fully trustworthy, however.

In this graph, in order to make sense of what freight transport is, values concerning passenger companies, PKP Regional and PKP Intercity to which PKP Cargo is leasing locomotive and driver are excluded. The graph has section traffic in ton/day in the x-axis and double scales in the y-axis; one is a scale of operation service distance (km) combined with the transport work in ton-km/year of each territory in the lower part and another is combined with income and the cost in the unit of Mln PLN in the upper. However, each bar (graph) showing transport work above 10,000 ton/day indicates amount summed up by every 5,000 ton/day territory, for example, in case of a bar at "> 15,000 ton/day", the bar indicates total amount accumulated from 15,000 up to below 20,000 ton/day.

According to the achievements (155 Mln ton and 44.9 Bn ton-km) of transport in 2002, this graph means that PKP Cargo operated freight trains in all 18,550 km as the operating service distance in order to cover the traffic all lines including small volume of less than 1,000 ton/day. Actually, PKP Cargo gained PLN 374 million as the operation profit through this transport work. However, the traffic volume mentioned above does not include that of military use and business use of railways.

According to PKP PLK's annual report, the track distance of PKP PLK in 2002 was 23,500 km.

As shown in the figure, the required distance goes up rapidly in the area of section traffic that shows 3,000 ton/day or less.

Meanwhile, in the upper part of showing income and cost, both of cost and income are in balance each other at the point of traffic volume of 10,000 ton/day or less and the longer the service distance is, the larger the profit increases from the point to a certain point.

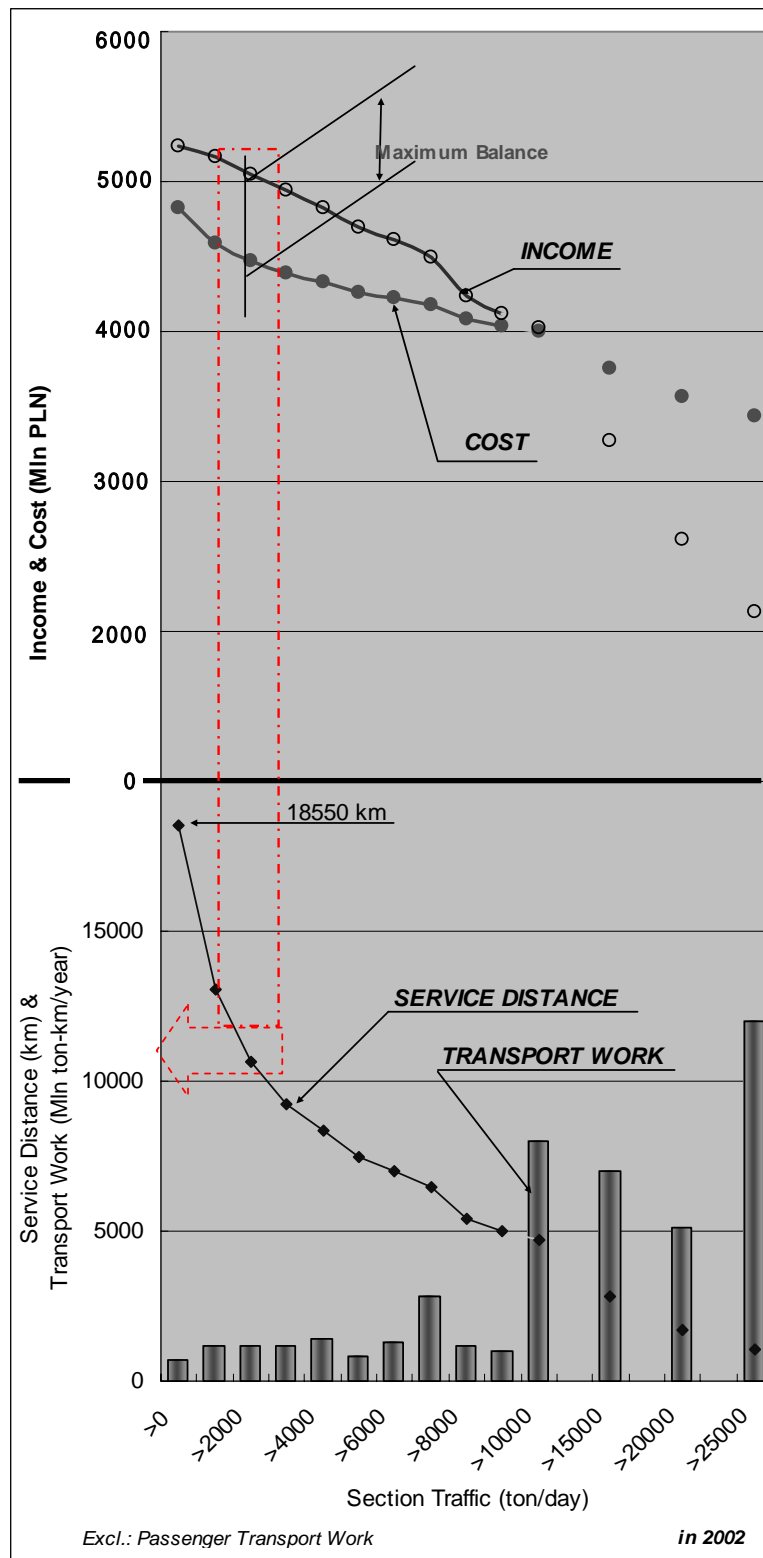


Figure 10.2.2 Service Distance and Profit

This means that gaining profit from the transport service requires service distance that

is more than some 5,000 km long covering traffic volume of less than 10,000 ton/day due to its present huge resources, because most of income gained from transport work disappears for covering the fixed cost in this shorter territory.

It is not a realistic story, but PKP Cargo can not gain any profit in the transport distance that is shorter than 5,000 km under the present cost structure.

This suggests that proper service scale and minimized transport (fixed) resource should be balanced in PKP Cargo management as mentioned below.

PKP Cargo gained the operation profit through 18,550 km long service distance in 2002. However, the most profitable part can be seen roughly at the point of the section traffic showing 2,000 ton/day from the upper part of the graph. From this relation in the graph, PKP Cargo can select around 11,000 km as the most profitable service distance from the present management strength.

The operating income and cost of the above two cases are compared in the Table 10.2.12 in calculation. As indicated in the table, PKP Cargo can obtain more profit (by PLN 212 million) in 11,000 km than that in 18,550 km.

**Table 10.2.12 Bigger Profftt Gained in Shorter Service Distance**

Section Traffic (ton/day)	Operation Distance (km)	Transport work (Bn ton-km)	Income (Mln PLN)	Cost (Mln PLN)	Balance (Mln PLN)
> 2,000	11,000	43.0	5,204	4,491	713
All	18,550	44.9	5,287	4,786	501
Balance	- 7,550	- 1.9	- 83	- 295	<b>212</b>

This estimation is calculated by basing on PKP Cargo's activity in 2002.  
Income and cost do not include value related with passenger companies.

PKP Cargo has some tasks in the management as mentioned above.

The operating factors concerned can not be identified exactly and clearly from the figure, but it can be seen that huge amount of assets and personnel, that is, the enormous fixed cost is heavy burden on the management.

PKP Cargo is required to cut down the cost and to improve the productivity.

And, even in case of the operating condition in the future lower demand, the further reduction of the cost will not cause any change in the tendency shown in the figure, and so the proper operation distance of PKP Cargo must be kept within the territory of less than 11,000 km. Actually, the demand forecast of 2006 and 2010 says that relation between the section traffic, 2,000 ton/day and the length, 11,000 will be maintained in either case, optimistic or pessimistic case.

For specifying the individual line to be operated in PKP network is required some detailed survey on modal share of transport market for the present and the future. However, in this study, the transport share of railway and road is not analyzed in detail, and so the final decision shall be made by a thorough investigation of freight railway market.

On the other hand, there may be another way to settle operation service scale, that is, “break-even” scale which shows profit/loss balanced in the business activity. As mentioned above downsizing the network of PKP Cargo is not easy because of the present customers and other operators like passenger railway companies that are operating together with PKP Cargo in the profitless territories. Furthermore, it is also very difficult for PKP Cargo alone to slim down huge number of excess personnel in short time. Then, in some case, PKP Cargo may have to take break-even scale as another choice to carry the excess personnel in the organization for a while. As mentioned later, this paper puts break-even scale in the action plan for PKP Cargo.

In order to officially decide the operating service scale of PKP Cargo, it is required to re-arrange the specific service route through negotiation among the concerned parties, such as PKP Regional, PKP Intercity, PKP PLK, PKP S.A. and the state government. The Government has its policy on military use or the like in advance. (A picture attached in this paper shows the freight transport routes covering lines of sectional traffic volume over 2,000 ton /day)

Of course, PKP Cargo might stand in the situation to be able to request the Government assistance in the case of the service distance beyond PKP Cargo’s responsibility or over 11,000 km approximately.

#### **10.2.6 Action Plan on Sliming down and Reinforcing PKP Cargo**

Table 10.2.13 shows an action plan for building up a proper management scale of PKP Cargo with significant cost reduction and productivity improvement as mentioned above.

This is to slim down the scale of PKP Cargo to meet the forecasted demand targeting at the end of 2006 and 2010. And as shown in Table 10.2.13, this study puts a target for privatizing PKP Cargo at some early point until 2010 because we expect restructuring work we have proposed would be quite promoted until the time, even though it is not completed and moreover PKP Cargo will have an epoch to open the Polish railways completely to the strong competitors from the western and eastern at the beginning of 2007.

In Table 10.2.13, firstly, cost reduction and productivity improvement will be implemented in transport scale of 2002 and then, the achievement, or result of the first sliming down activity will be used for planning the management scale in each target year, in 2006 and 2010.

On the other hand, there are two alternatives in this plan, one is a plan as “without”, not to shorten the operating distance and another is a plan as “with”, to shorten it down to 11,000 km by counting on the best profitability of PKP Cargo. Furthermore, as an alternative, “break-even” scale with excess personnel inside the organization is set in the plan shown in Table 10.2.13. In this plan, all the excess assets excluding excess personnel shall be disposed as much as possible. However, most of excess personnel shall be carried in the organization excluding some 3,700 persons that can be estimated 2,000 for PKP Regional and 500 for PKP Intercity in canceling the lease contract and some 1,200 for PKP Cargo’s own Downsizing. In this case to get “break-even” of the management, the service distance is estimated some 15,000 km.

The calculation in this plan is based on unit cost brought from the financial data in 2002.

Some factors that have been studied for downsizing so far in this paper are programmed into this table. Even in the second stage (target year: 2010), PKP Cargo is expected to be black in the balance between income and cost. However, PKP Cargo will have to experience some severe pain in the processing so as to accomplish the sound condition economically, for example, by cutting down considerable labor force directly or through drastic system change.

Moreover, in this study, some factors, such as non-efficiency hidden behind the huge organization are not revealed, and therefore it is definitely necessary to investigate the condition in detail and establish the re-vitalization program.

#### (1) Preparation for the future

It is insufficient only to slim down the scale. It is definitely required to reinforce management strength for the future as well, so that rather big cost for rehabilitating rolling stock chiefly is built in this plan. The rehabilitation shall be implemented on the rolling stock, locomotive and freight wagon which number shall be at 2006 in 7 years up to 2010. In some case, this fund may be used for replacing old rolling stock by advanced one with interoperability or the like. The present rolling stocks have allegedly average lifetime 21 years (Detail data has not been collected). In case of locomotive, 46% of the entire locomotive shall be unnecessary by slimming down, and therefore the average lifetime will be drastically younger by screening them out.

However, preparation like invest on assets for the future will be definitely necessary.

#### (2) Acceptable TAC

In the process of making the reference scale based on actual transport works in 2002 only by slimming down excess assets succeeded from the old PKP, total cost is compressed approximately by 11.2%. In this stage, the ratio of TAC of the total cost increases from 29.6% to 33.3%.

Meanwhile, after definite effort of cost down by further downsizing and productivity improvement, the total cost can be cut down to PLN 4,087 million excluding the rehabilitation cost amounted PLN 872 million on the same transport works, 44.9 Bn ton-km. However, the weight of TAC increases to 40.2% of the total cost.

From the viewpoint of PKP Cargo, it might be possible to claim that acceptable TAC to PKP Cargo should be limited to the present level or less in order to encourage PKP Cargo to have an incentive for further management improvement.

Especially, regarding track access charge of freight transport in Polish railways, it is reported in this paper that it is rather high in comparison with other railways in EU in this paper.

Furthermore, it is also required that PKP PLK will have definite effort to rationalize its work in order to establish convincing rate of TAC.

TAC that does not make sense in public must cause not only PKP Cargo but also Polish railways fell apart.

Table 10.2.14 compares productivity of personnel, i.e. the relationship between traffic (ton-km basis) and number of personnel, between Poland and three major countries. The table also shows productivity of PKP Cargo that is expected in 2010 through estimation.

According to the estimation in this paper, PKP Cargo can expect some profit in dropped down traffic demand in the year. But this table suggests that there is plenty of room for further improvement in comparison with other foreign railways. However, it is very dangerous to further cut off the assets or property including personnel much more without detail data in this paper, and so that it is indispensable to thoroughly investigate thoroughly the present condition of PKP Cargo.

Table 10.2.13 Action Plan of Downsizing and Privatization of PKP Cargo

Item	Unit	Stage 1										Stage 2					
		2002	Reference	Preparation Process					2006			2010					
				Improvement (Without)					(With)	(Without)	(With)		(Without)	(With)			
				Down sizing on Traffic (Base)	Cancellation Leasing contract	Productivity	Maintenance Improvement (Rehabilitation)	Total	Cut-off profitless line	Total	Down sizing on Traffic Demand with rehabilitation	Cut-off profitless line	Total	(Breakeven) with excess personnel inside organization	Down sizing on Traffic Demand with rehabilitation	Cut-off profitless line	Total
Traffic Volume	Mln ton	155.1			155.1			-		142.2	-	-			120.7	-	
	Bn ton-km	44.9			44.9			43.0		41.6	39.6	40.0			35.3	33.3	
	Mln train-km	73.3			73.3			-		-	-	-			-	-	
Service Distance	km	18,550			18,550			11,000		17,650	11,000	15,000			17,650	11,000	
Personnel	Person	50,516	46,134	-9,188	-1,498		35,448	-470	34,978	32,843	-433	32,410	46,800		27,869	-364	27,505
Excess Personnel	Person	(3,693)	4,382	9,188	1,498		15,068	470	15,538	2,605	433	3,038	3,716		4,974	364	5,338
Excess Personnel (Cumulative)	Person						15,068		15,538	17,673		18,106	3,716		22,647		23,011
(Major Property)																	
- Rolling Stock																	
Electric Locomotive		1,762	1,543	-472	-96		975		975	903		903	903		767		767
Diesel Locomotive		2,054	513	-217	-26		270		270	250		250	250		212		212
Total		3,816	2,056	-689	-122		1,245		1,245	1,153		1,153	1,153		979		979
Wagon		90,185	73,877	0	0		73,877		73,877	68,447		68,447	68,447		58,081		58,081
Wagon (Leased)		39,828															
- Station		1,495															
- Marshaling Yard		10															
- Depot		19															
- Other (Container Yard)																	
Income	Min PLN	5,923	5,923	-633	0	0	5,290	-224	5,066	4,901	-235	4,666	4,713		4,159	-236	3,923
Cost	Min PLN																
Depreciation		345	265	-20	-4	0	241		241	223		223	223		189		189
Material/Energy		835	835	-175	-40	0	620	-20	600	574	-18	556	574		487	-15	472
TAC		1,645	1,645	0	0	0	1,645	-428	1,217	1,549	-376	1,173	1,185		1,447	-398	1,049
Outsourcing		894	493	-228	-28	0	237		237	220		220	220		186		186
Tax/Charge		36	36	0	0	0	36		36	36		36	36		36		36
Personnel		1,630	1,488	-296	-48	0	1,144	-15	1,129	1,060	-14	1,046	1,510		899	-12	887
Others		164	164	0	0	872	1,036		1,036	960		960	960		814		814
Cost Total		5,549	4,926	-719	-120	872	4,959	-463	4,496	4,622	-408	4,214	4,708		4,060	-425	3,635
Profit (Loss)	Min PLN	374	997	86	120	-872	331	239	570	279	173	452	5		99	189	288
Rate of Profit		0.063	0.168				0.063		0.113	0.057		0.097	0.001		0.024		0.073

(note 1) Estimated by JICA Study Team

(note 2) Averaged by numbers at the beginning of 2002 and 2003

(note 3) 7% of number of personnel (52,754) transferred from the old PKP at November 1, 2001

(note 4) Summed up excess number caused by down sizing and number remained from original excess number. (= 2,927+ 1,455) 1,455 : excluded natural drop from 52,754 in 2002.

1,455=3,693-(52,754 - 50,516)

**Table 10.2.14 Productivity of Employees (2001 /2010 )**

Year	Company	Traffic	Employee	Productivity
		(Bn ton km)	(person)	(Mln ton-km/person)
2010	PKP Cargo	35	27,505	1.27
		46	52,472	0.88
2001	DB (Cargo)	74	32,440	2.28
	SNCF (Cargo)	52	15,540	3.35
	JR Freight	22	8,709	2.53

### 10.2.7 Structural Reform

We have studied cutting down the operation cost so far by sliming down the structure and improving the productivity quantitatively as much as possible. In addition, some tasks as shown in Table 10.1.8 will be reviewed hereunder.

#### (1) Treatment of deteriorated assets succeeded from the old PKP

The most massive assets owned by PKP Cargo are rolling stocks. Currently, there are 3,816 locomotives and 90,185 freight wagons except for 39,828 leased wagons. In case of locomotive, approximately 60% of the number is estimated to become unnecessary. In this study, unfortunately, the individual data thereof has not been collected, but it is possible to estimate that there might be many deteriorated or heavy damaged rolling stocks as candidates to be abolished. This means that most of deteriorated rolling stocks transferred from the old PKP can be disposed of. The situation is also same for freight wagons. The remaining rolling stock shall be rehabilitated thoroughly.

Meanwhile, it is also important to consider the facilities that have been used for transport works or rolling stock inspection and repair. In this paper, it is not mentioned about facility condition due to lack of data, but it is possible to consolidate them by closing some facilities in case of transport work decreased. In the process, some facilities or machinery must be replaced by advanced ones.

#### (2) Cost reduction; labor, Energy Cost and TAC

3 items of costs; energy, TAC and labor cost amount to 74% of total operating cost in 2002. It is very important for the management to cut down these costs.

**Table 10.2.15 Cost Structure (2002)**

Item	Mln PLN	%
Materials/Energy Cost	835	15.0
TAC	1,645	29.7
Labor Cost <sup>(note)</sup>	1,630	29.4
Outsourcing Cost	895	16.1
Others	544	9.8
Total	5,549	100

(note) Included some cost concerned



## 1) Labor Cost:

Regarding the labor cost, it is expected to reduce by 30% at the base of the 2002 year in the action plan of this paper (including cancellation of lease contract). However, it might be better to reduce the management staff, which currently stands at 13.97% of the total personnel at present. Generally, if the number of staff is categorized by head office and regional ones, it must be less than 5 % for the head office and the total of management staff including regional office must be up to 10%. After examining the personnel structure of the management, it must be cut down drastically.

As a matter of course, personnel-cut will cause pain to them, and so it is indispensable to provide them with warm-hearted arrangement, such as re-education for the future job and provision for funds for the project.

## 2) Energy Cost:

In case of energy cost, it is expected to reduce by 5 % (PLN 40 million) by improving the productivity of locomotive operation. This amount does not include cost of diesel oil used in leasing contract. (See Table 10.2.13)

Moreover, the taxation isn't mentioned in the action plan of this paper, but the energy cost is also expected to fall a little by the exemption of tax on road finance in the diesel oil tax.

Table 10.2.16 shows tax structure of diesel oil cost expended by PKP Cargo in 2002. This means that the tax- exemption on road finance will lead to the great cost-cut ( PLN 40 million annually) in PKP Cargo. This is calculated in the result of 2002 including diesel oil for passenger train. However, cost-cut by exempting the tax amounts to 0.7% of the total cost.

It is necessary to appeal to the government for proceeding with the tax law promptly.

**Table 10.2.16 Oil Cost & Tax (2002)**

Item	Mln PLN	%
Diesel Oil Cost	291	
Commodity Tax	133	45.6%
Tax for road	40	

Road finance tax is involved by 30% in commodity tax.

Commodity tax is involved by 45.6% in the oil price. (Average)

## 3) TAC:

It is very difficult only by PKP Cargo's one-side opinion to judge whether or not the level of TAC amount is reasonable.

PKP Cargo's expenditure about TAC amounts to 30% of the total cost in 2002 and it goes up to 34% just after cost that can be controlled internally being cut down by following transport works decreased in the same period.

PKP Cargo is going to further improve the structure, so that it is expected to make a rule

of the charge so as not to hamper the incentive of the operating company.

#### 4) Other cost:

Other than that, there are many menus that PKP Cargo has to tackle for improvement including cost-cut. In this study, profitless train that PKP Cargo may have been operating could not be identified. Thus, there must be some profitless trains left in the cost-cut action plan of this paper.

It is indispensable to establish an advanced cost accounting system of individual train and encourage staff in charge to change their minds for cost awareness in order to abolish profitless trains and not to build a single profitless one.

On the other hand, it may be unfair not to say about some cost to be required additionally in the process of Downsizing. That is the cost for reinforcing the alternate facilities or the capacities instead of to the closed sales front, for example.

#### ( 3 ) Productivity Improvement

In this study, some items for which the considerable effect can be expected are selected for estimating improvement of productivity. However, there must be numbers of other items to be improved or rationalized in all over the working sites, such as consolidating the stations, marshaling yards and sales fronts, closing non-profitable lines.

Furthermore, there must be huge number of works to be improved in the working sites, and those should be resolved through something like TQC activities that have been standard technique in many railways.

Abolishing profitless lines is calculated roughly in the action plan but the detailed actual plan should be decided through further investigation.

### **10.2.8 Strategic Market Development and Investment**

It is clear that an enhanced marketing capability will be required if PKP Cargo wants to maximize its opportunities, and retain its key role in the Polish freight transportation scene. The company has in general a good marketing capability and a well-founded understanding of its markets. Nevertheless, there is scope for additional activity, and the following is recommended as the high priorities for the development of new market and profitable new services:

- (1) The company needs to establish a solid marketing foothold within those industries which are likely to develop in the future. Special attention will be needed in the area of intermodal traffic, where there is possibility of its market share increasing substantially.
- (2) In addition, the increase of its share in the transport of general consumer goods should be sought through the establishment of the chain of Logistics Centers, designed to provide rail-based distribution and storage facilities capable of dealing containers, swap-bodies and conventional wagons. Development of these centers needs to be promoted as quickly as possible, and so a clear view can be gained of the range of services to be provided and the associated investment requirements.

- (3) In conjunction with the above, early resolution must be sought of any outstanding legal ownership issues with regard to the proposed Logistics Center sites; the company's investments in these centers will be provided, in part at least, through the contribution of the land value of the sites.
- (4) Winning of new traffic will call for the ability to respond rapidly to requirements for wagon types not currently owned by the company. This is most likely to be achieved by close relationships with the operators of wagon leasing fleets. With regard to the operation of specialized rolling stock, in particular for trainload operation, there must be acceptance of empty return working with a view to maximizing wagon productivity.
- (5) While the likely extent and effects of Open Access competition are not clear, the company should seek to protect itself by giving special attention to the signing of new long-term contracts with customers who have significant volumes of traffic to offer. In practice, it is known to be already pursuing this solution, and the process should continue.
- (6) A number of opportunities for new service development will surely exist, for which detailed viability studies should be undertaken as quickly as possible. These include in particular the institution of Rollende Landstrasse (RoLa) operation between the Belarussian and German frontiers, where PKP will be able to offer the definite time savings to road haulers.
- (7) Revised train service networks are likely to be required in order to maximize intermodal traffic acquisition. These will need to be based on dedicated train operation for this traffic, rather than the use of the standard wagonload network.
- (8) The company must seek such amendment to existing legislation as may be required to ensure that it has sensible commercial freedom, and is not placed at a disadvantage to compare with road haulage and other rail operators. This particularly refers to the ability to refuse the traffic which cannot be handled profitably.

### 10.3 RECOMMENDATIONS

PKP Cargo will be able to continue the positive balance in the management even in a scene of traffic demand dropping in the future, but with great pains. And it will also be able to develop the structure as an integrated logistic company with great effort. Under the circumstances, PKP S.A. announced a selection process of consulting firms for actual privatisation of PKP Cargo on 17 October, 2003.

Through this study, however, it is recognized that some factors should be improved for the future privatisation of PKP Cargo in advance. Furthermore, in order to successfully carry out the aim and the end, there are some tasks beyond the freight railway operator's effort.

Thus, as a purpose of this study, we propose some recommendations which are classified into the self effort and the assistance from the Government as follows.

### 10.3.1 Self Effort

(1) Management Structure

Sliming down Headquarter drastically

Making up the train diagram by itself

(2) Cost awareness

Establishing the train cost accounting system

(3) Cancelling the leasing contract between Passenger companies

(4) Seeking for the further cost-cut menus on outsourcing

(5) Re-organizing sales fronts intensively

(6) Organizing PKP Cargo group

(7) Building up Freight transport information system covering wider market area

Trans-European interoperability/ International competitiveness

(8) Disposing of the surplus personnel

Establishing *Human Bridge Bank* for disposing of surplus personnel

(9) Positive investment

Developing the market

### 10.3.2 Assistance from Government

PKP Cargo is moving towards the establishment of sound management structures, but is hindered by the large quantity of assets transferred from the old PKP. Some elements of this problem can be handled through the company's own efforts, but others lie outside the company's capability to resolve. In these cases, PKP Cargo has no choice but to seek for the positive involvement and support of the Polish Government:

- Financial assistance for restructuring of employment, to overcome the problem of surplus personnel.
- Subsidy for the replacement of deteriorated rolling stock or facilities by new ones.
- Reduction on the tax of fuel, fixed property or other assets required for the development of rail freight transport in Poland.

**ATTACHMENT 9.1.2****Trains on 400 line between Warszawa and Gdynia**

Train Number	Type	Train Number	Type
IC1501	InterCity	IC1501	InterCity
IC 3501	InterCity	IC 3501	InterCity
IC3503	InterCity	IC3503	InterCity
Ex1511	Express	Ex1511	Express
Ex15401	Express	Ex15401	Express
Ex15403	Express	Ex15403	Express
Ex18401	Express	Ex18401	Express
Ex2513	Express	Ex2513	Express
Ex1513	Express	Ex1513	Express
Ex1815	Express	Ex1815	Express
Ex3511	Express	Ex3511	Express
Ex3511	Express	Ex3511	Express
Ex4511	Express	Ex4511	Express
Ex4513	Express	Ex4513	Express
Ex 25401	Express	Ex 25401	Express
11703	Night Express L	11703	Night Express L
38703	Night Express L	38703	Night Express L
45507	Fast	45507	Fast
15103	Fast	15103	Fast
15113	Fast	15113	Fast
18111	Fast	18111	Fast
58104	Fast	58104	Fast
70104	Fast	70104	Fast
55112	Fast	55112	Fast
58102	Fast	58102	Fast
58106	Fast	58106	Fast
97100	Fast	97100	Fast
18501	Fast	18501	Fast
38509	Fast	38509	Fast
E60237	Ordinary	E60237	Ordinary
E 15421	Ordinary	E 15421	Ordinary
E 6021	Ordinary	E 6021	Ordinary
E60233	Ordinary	E60233	Ordinary
E60235	Ordinary	E60235	Ordinary

**ATTACHMENT 9.1.3****Tariff table of PKP Intercity**

Distance km	Express train	
	kl.2	kl. 1
By km		
Up to 5	5.50	8.25
6-10	7.20	10.80
11-15	8.80	13.20
16-20	10.50	15.75
21-30	13.20	19.80
31-40	15.90	23.85
41-50	18.60	27.90
51-60	21.40	32.10
61-70	23.80	35.70
71-80	26.20	39.30
81-90	28.60	42.90
91-100	31.00	46.50
101-120	38.00	57.00
121-140	42.00	63.00
141 -160	45.80	66.70
161-180	49.40	74.10
181-200	53.00	79.50
201-220	55.80	83.70
221-240	57.50	86.25
241-260	59.10	88.65
261-280	60.60	90.90
281-320	63.50	95.25
321-360	66.20	99.30
361-400	69.00	103.50
401-440	70.00	105.00
441-480	71.00	106.50
481-520	72.00	108.00
521-560	73.00	109.50
561-600	74.00	111.00
601-640	75.00	112.50
641-680	76.00	114.00
681-720	77.00	115.50
721-760	78.00	117.00
761-820	79.10	118.65
821-880	80.30	120.45
881-940	81.30	121.95
941-1000	82.30	123.45

**ATTACHMENT 9.1.4****Trains on CMK100 line**

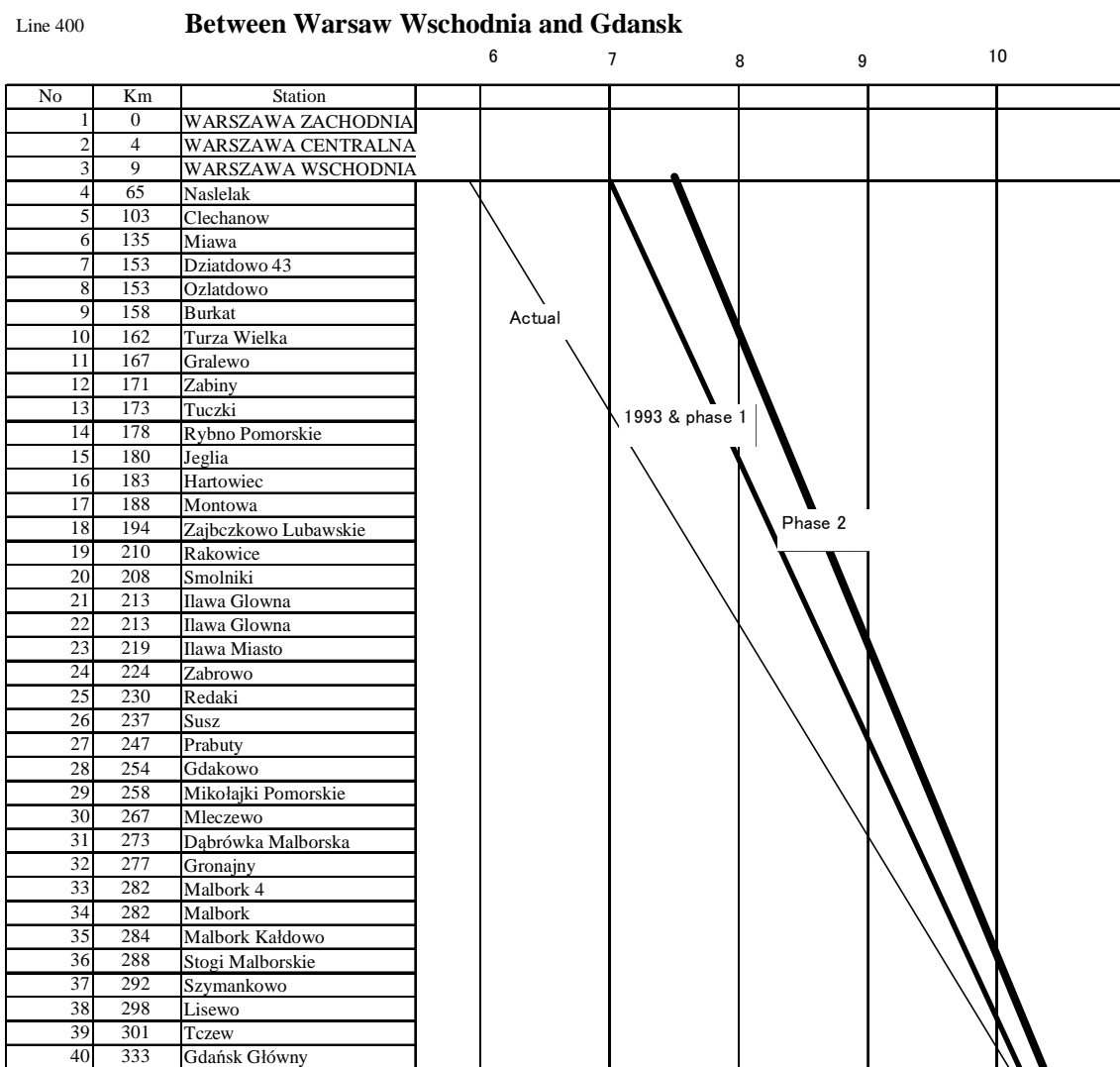
Train number	Type of train	Train number	Type of train
EC131	EuroCity	EX13415	Express
EC106	EuroCity	EX1309	Express
EC105	EuroCity	Ex1319	Express
IC1301	InterCity	EX1411	Express
IC1303	InterCity	Ex1413	Express
IC5301	InterCity	EX56411	Express
IC1401	InterCity	Ex1417	Express
IC1403	InterCity	53703	Night Express L
Ex1415	Express	83703	Night Express L
Ex1311	Express	203	Night Express L
EX13403	Express	24103	Fast
Ex1313	Express	13101	Fast
Ex13413	Express	24101	Fast
Ex13401	Express	13509	Fast
Ex5313	Express	53505	Fast
Ex1317	Express	53509	Fast
Ex5311	Express	21/208	Sleeper train
EX1315	Express	337	Sleeper train

**ATTACHMENT 9.4**

**SUGGESTIONS FOR SPECIAL STUDIES**

**9.4.1 Indication of some example of new train diagram**

**9.4.1.1 Train diagram on line 400**



**Figure A9.4.1 Train travel time by stages on line 400**

**Table A9.4.1 Travel time on line 400 by stage**

(Warszawa Wschodnia-Gdansk)

	Actual	Phase 1	Phase 2
Warszawa Wschodnia-Gdansk	3.46	3.10	2.50
Warszawa Wschodnia-Gdansk	100%	84%	75%

Income increase on line 400 will be roughly expected 25% and cost reduction of rolling



stock and train crews are 20%. The energy consumption can be reduced 30% by modernized EMU.

The train diagram between Warszawa and Gdynia is shown in the Figure 9.4.2. It is pictured by uniform interval system by the assumption that the train sets are replaced by new EMU 160.

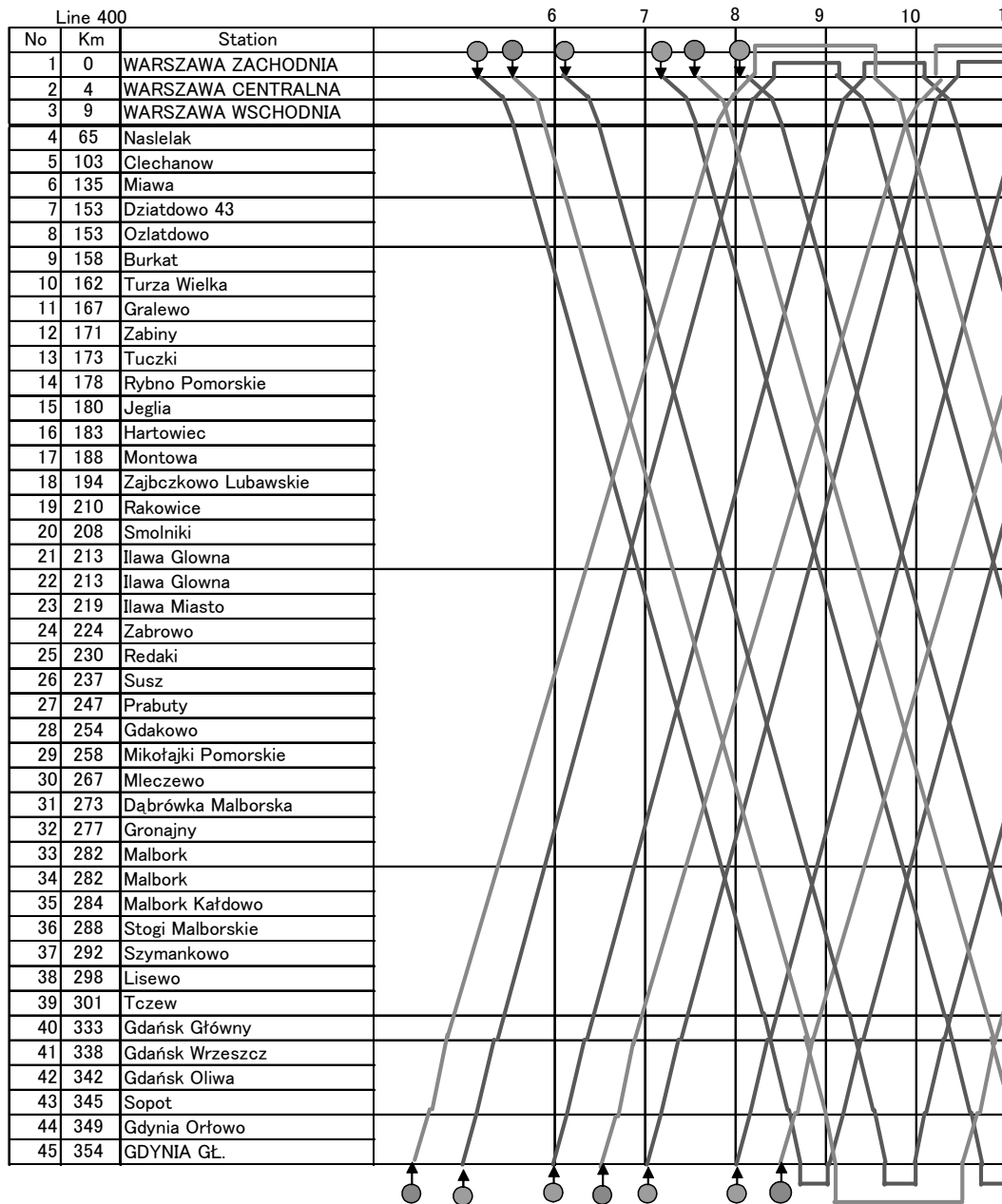


Figure A9.4.2 The train diagram for improved operation on line 400

The train diagram with equal time interval is profit able for using train sets and train crews not only for the convenience of passengers.

Regional trains and PKP Intercity trains are operated together on the same track but the

Regional fast train stops at more 5 stations than PKP Intercity trains. 5 stops will prolong the travel time approximately 15 minutes. The faculty of PKP Intercity express and that of Regional fast train is equal for operational faculty. The PKP Intercity trains have a possibility of increasing speed until to 200 km/h and better interior design.

### 9.4.1.2 Train diagram on line 300

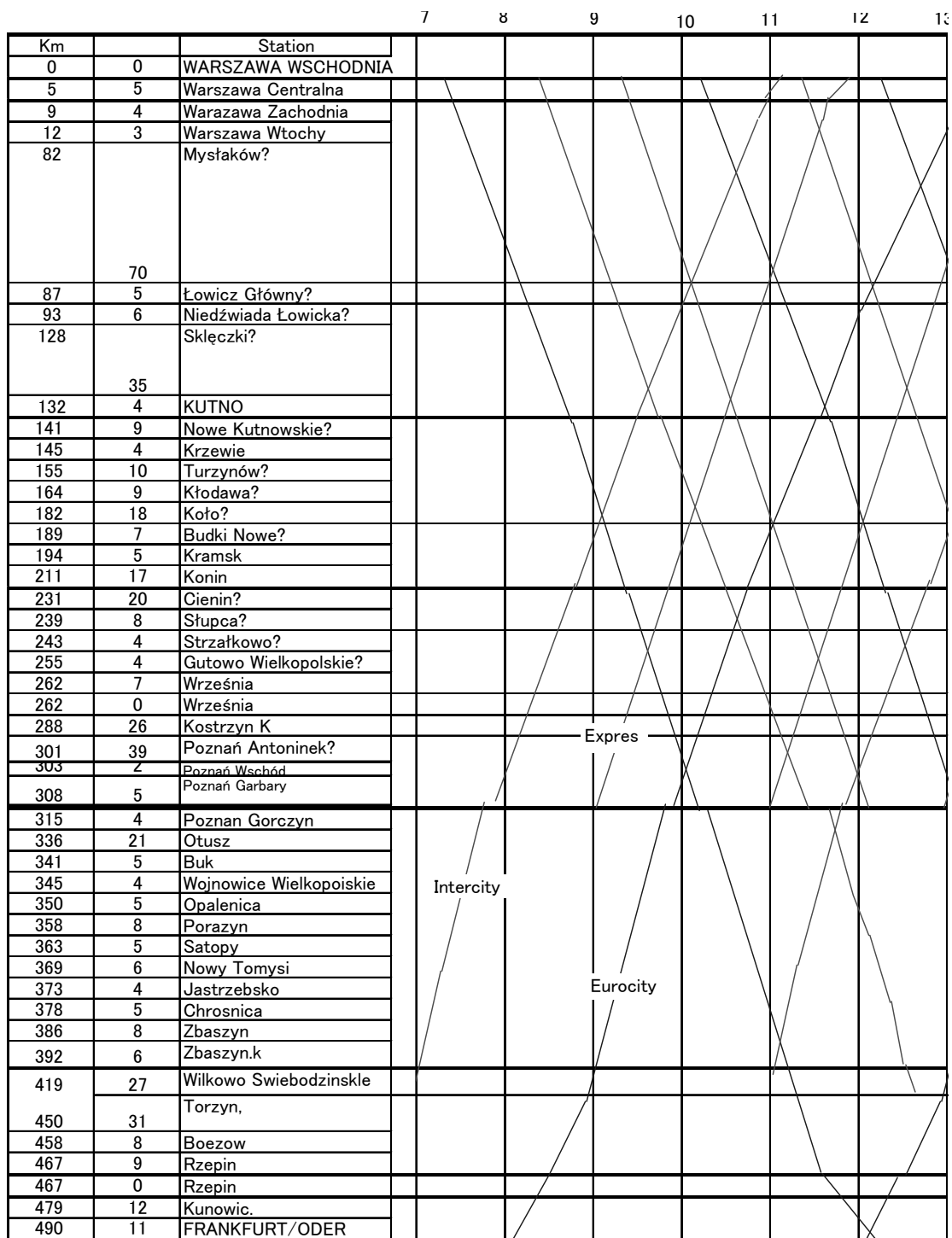


Figure A9.4.3 Adoption of new train diagram by actual train sets on line 300

The above train diagram is drawn by actual speed. Here run Eurocity, Intercity, Express, Fast and night sleeper trains.

The train diagram is a little complicated for various type train services. On this line section, there exit many junction stations and it might be necessary to prepare different services.

In future, this section will become the main target of running 200-250 km/h operation. Therefore, the detail planning for the mixed operation with slow trains is very important for constructing economic high speed line, because the economic design of high speed track is in-negligible.

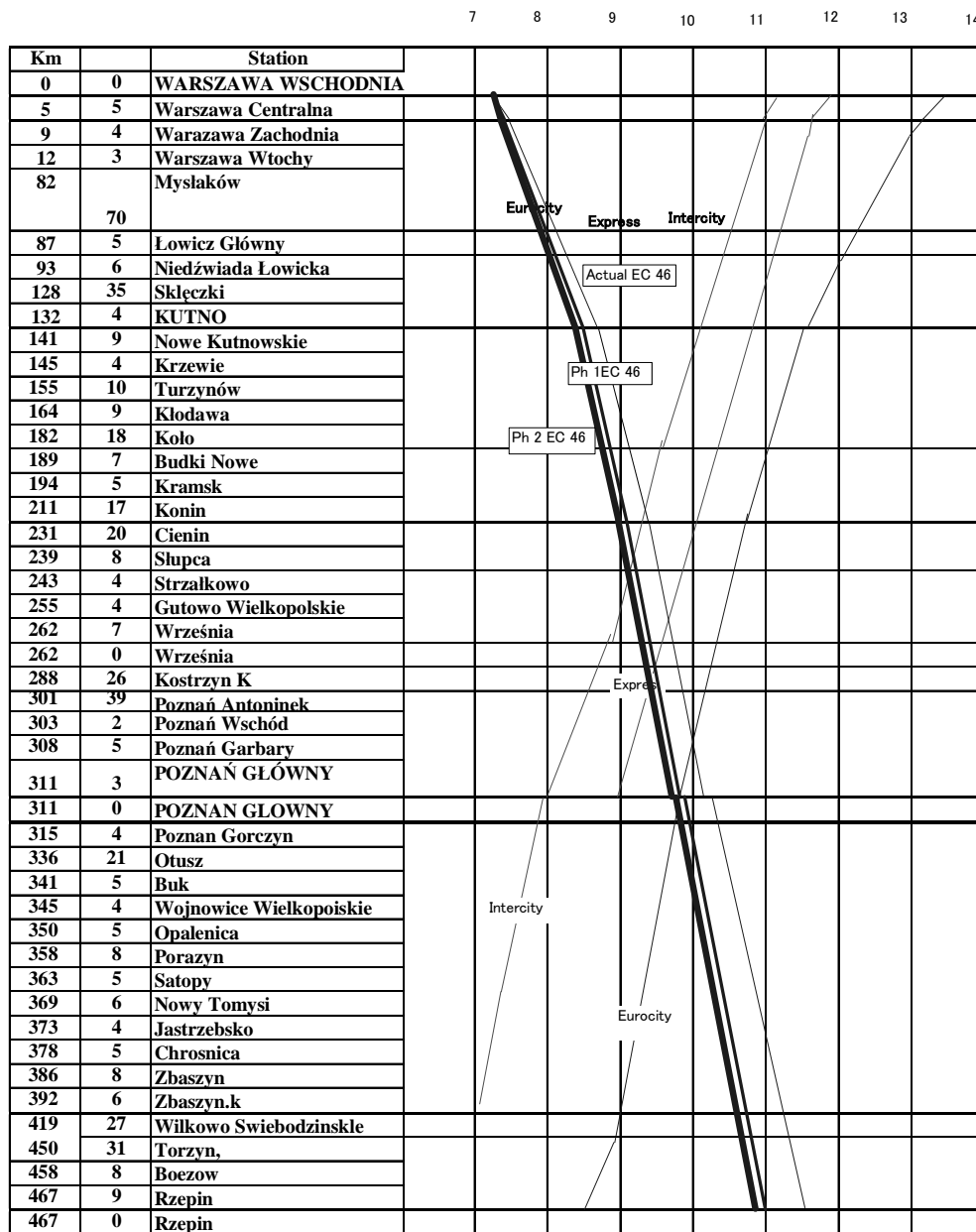


Figure A9.4.4 Train travel hours on line 300 by stage

Note: In case of New EMU 160 and actual train set

Actual	Train speed	_____
Phase 1	Improvement of train travel time 13%	_____
Phase 2	Improvement of train travel time 15%	_____

The train operation cost will be decreased proportionally to the train travel time. The necessary train number will be reduced if passengers remain in same level.

The passenger number will increase when travel time is shortened. In the case of increase of passenger demand, the efficiency increase of rolling stock rotation will absorb the demand increase.

**Table A9.4.2 Train travel time on line 300 by stage**

Section	Actual	Phase 1	Phase 2
Warszawa Centralna-Poznan	2:41	2:16	2:10
Warszawa Centralna-Rzepin	4:01	3:30	3:25
Warszawa Centralna-Poznan	100%	84%	81%
Warszawa Centralna-Rzepin	100%	87%	85%

Income increase on line 300 will be roughly expected 15% and cost reduction of rolling stock and train crews are also 15%. The energy consumption can be reduced 30% by modernized EMU.

- c. High cost of energy consumption due to the increased braking on intermediate way
- d. Reduced speed policy caused by the unaffordable costs of track maintenance
- e. Long travel time by an overabundance of redundancy time in train schedule diagrams
- f. Long stopping times at intermediate stations
- g. Lack of funds for replacing the aged rolling stock
- h. Low capacity of conventional train control system
- i. Insufficient passenger information system

Adoption of new light-weight EMU train sets can solve items a. through f. above.

**Table 9.1.1 Figures of PKP Intercity Operation**

Specification	Measure units	4 Months of 2001		2002	
		Period of time	Day	Period of time	Day
Commercial route*	km			9,198	
Passengers year/day	Persons	2,999,131	24,583.04	8,921,554	24,442.61
Passenger - kilometers	Thousands of passenger -km	965,802	7,916.41	3,138,030	8,597.34
Train – kilometers year/day	Train - km	7,120,162	58,361.98	21,065,684	57,714.20
Wagon - kilometers	Wagon - km	60,298,875	494,253.10	166,067,809	454,980.30
Revenues – grand total	Thousands of PLN	182,138		697,972	
Costs - grand total	Thousands of PLN	216,964		730,376	
Employees at the end of the period	Persons	1,063		1,984	
Number of rolling stock in operation at the end of the period	Unit	1,329		1,340	

\* domestic 5 833 km, international 3 365 km

Note: Data source is PKP Intercity

In this report, various factors that prevent the progress of PKP Intercity operation are presented.

The replacement schedule of rolling stock and the evaluation of profits (cost/benefit) are also presented in the following section.

Factors g, h, and i are to be discussed later and the related improvement measures are to be presented.

## 9.1.1 Income and Expense Structure

### 9.1.1.1 Cost Structure

For the newly build PKP Intercity, the initial cost for raising up the commercial activity and the payment for the operation, including TAC, is surpassing the total income, although by a comparatively small margin.

If the PKP Intercity infrastructure were to be rebuilt, the costs of the initial expenses for raising commercial activity and the costs of operation, including TAC, would exceed the total income, although by a comparatively small margin.

Accordingly, the measures for preparing sufficient funds for creating a new age of passenger transport are very important.

**Table 9.1.2 Cost of PKP Intercity**

Unit: in 1000 PLN

Cost specification	2002		
	Period of time	Average month value	(%)
Costs - grand total	730,376.40	60,864.70	-
TAC	212,067.00	17,672.30	29%
Locomotive lease charge	48,487.20	4,040.60	7%
Costs of traction energy	78,847.10	6,570.60	11%
Personnel costs	48,875.40	4,073.00	7%
Rolling stock' costs	159,071.50	13,256.00	22%
Other costs	183,028.20	15,252.20	25%

Note: Data source is PKP Intercity

- The internal costs of maintaining aged passenger coaches and the TAC occupy the major parts of operation cost.
- The replacement of deteriorated coaches is important for demonstrating the potential for competing with foreign railways.
- The other cost shows that the few year historical background forces to utilize the ticket selling offices of PKP Intercity.
- Negotiations should be held with PKP Cargo to reduce the lease charges for the locomotives and drivers

In any event, PKP Intercity would do best to follow the aggressive measures of railway transportation that can be seen in European countries of France, Germany, Spain, and Italy, England and in Japan and other countries with substantial railway systems.

High-speed passenger transport by rail can also help in the reduction of other issues, such as the suppression of CO<sup>2</sup> gas emissions, enhanced travel ease to airports and other transport centers as well contributing to reduced road congestion.

### 9.1.1.2 Income Structure

The major items of income for PKP Intercity are the sales of tickets in domestic/international traffic and the sales of additional tickets for seat reservations.

In near future, the PKP Intercity could face severe competition from newcomers in the prospective railway market who are supported by foreign funds.

**Table 9.1.3 Income Structure of PKP Intercity**

			in 2002
Number	Specification	Value	Total share in revenues
I.	Total revenue	697,971.82	100%
II.	Basic activity	656,102.76	94%
	of which		
1.	Sales of tickets in domestic traffic	434,959.89	62.20%
2.	Sales of tickets in international traffic	93,136.78	13.34%
3.	Sales of additional tickets for seats	54,428.48	7.80%
4.	Sale of right for making a journey	23,482.47	3.36%
5.	Transport of luggage and mail	3,896.10	0.56%
6.	Subsidy	25,291.24	3.62%
7.	Remaining revenues	20,907.80	3.00%
III.	Revenues resulting from goods and materials sale	37,728.41	5.41%
IV.	Financial revenue	2,186.49	0.31%
V.	Revenues resulting from goods and materials sale	100.29	0.01%
VI.	Other revenues	1,854.27	0.27%

Note: Data source is PKP Intercity

### 9.1.1.3 General Outlook of Financial Status

Based on its income statements, the financial situation of PKP Intercity is being greatly improved. This improvement was achieved by the reduction of outsourcing costs and an increase in sales. Most of the operational costs are due to the internal trading within the PKP group as well as PKP Regional. However, in this case, PKP Intercity is completely different from PKP Regional because PKP Intercity does not have any obligation to be engaged in unprofitable train operations. Therefore, the most important matter for PKP Intercity is to reduce the internal trade costs of the profitable train operations, enhancing its international competitiveness.

### 9.1.1.4 Internal Trade Prices

#### (1) TAC (PKP PLK)

The percentage of TAC in the operational cost is 35 %. Therefore, the reduction of TAC has a huge influence on the financial situation of PKP Intercity. However, the business inefficiency of PKP PLK influences the financial status of PKP Intercity through TAC and cannot be avoided by PKP Intercity's efforts.

**(2) Rental fee (PKP Cargo)**

PKP Intercity rents locomotives and drivers from PKP Cargo. However, since PKP Intercity does not have enough information of the adequacy of the rental prices, the business inefficiency of PKP Cargo might influence PKP Intercity through the rental fees and cannot be avoided by PKP Intercity's efforts.

Article 9 of the Corporate Tax Law of Poland regulates transactions among group companies. According to this article, companies in Poland have to prepare documents showing cost components of trade procured from group companies. These documents are expected to be used for tax inspections to investigate the adequacy of internal trade prices among group companies. However, this article gives buyers the chance to know the cost components of the internal trades among group companies. Utilizing this data, PKP Intercity can negotiate with PKP Cargo to optimise the trade prices.

**(3) Energy Cost (PKP Energetyka)**

PKP Intercity procures electricity from PKP Energetyka. At present, electricity charges from PKP Energetyka are based on the estimated electricity consumption. Therefore, actual electricity consumption is unknown. Under this circumstance, it is difficult for PKP Intercity to make efforts to reduce electricity charges. In order to avoid this problem, PKP Intercity should adopt a charge system based on the actual consumption as recorded by electricity meters.

However, note that the electricity charges based on the actual consumption might increase the expenditures for electricity. It would also serve as evidence for the inefficient operation of the train. If the new charge system is introduced, PKP Intercity needs to calculate standard electricity consumption for train operations and they develop criteria locomotive drivers to maintain for efficient operation.

**9.1.1.5 Cash Flow of PKP Intercity**

The largest debtor of PKP Intercity is PKP Regional, to which accounts receivable amounted to 89 million PLN at the end of the fiscal year 2002. PKP Intercity counts on this credit as resources of TAC payment to PKP PLK. Therefore, if PKP Regional falls into insolvency, PKP Intercity cannot repay the debts to PKP PLK and will receive serious financial damage. In order to avoid this situation, it is necessary to improve the Regional Transportation System.

**9.1.1.6 Personnel****Table 9.1.4 Employment of PKP Intercity**

as of 31 December, 2002

Regional Office	No of employee
Warszawa	1,212
Krakow	302
Poznań	293
Head office	176
Total	1,983

Data: PKP Intercity



The above employment figure shows the importance of offices in major cities, especially Warszawa office.

PKP Intercity started with approximately 1000 personnel, and employed 1983 employees as at December 2002. The actual number of personnel in 2003 is as shown in the following table.

The number of employees is increasing because of the necessity of consolidating the commercial activities.

**Table 9.1.5 Personnel Allocation by Category**

Employment as of April 2003

No	Specification	Number
A.	Employees - total number of which	2,040
B.	Commercial team of which	1,302
	Head	389
	Conductors	366
	Train reviser	10
	Ticket cashiers	244
	Computer scientist	110
	Others	183
C.	Team of technical division	353
D.	Train team	53
	Train dispatchers	28
	Signalman	16
	Switch-man	4
	Train dispatcher assistant who deals with administration work	5
E.	Shunting teams	24
F.	Administration employees	308
	contracts of mandate	11+4 part-time

Data: PKP Intercity

## 9.1.2 Operation Issues

### 9.1.2.1 Service Level

The company operates its services to a high standard of punctuality and reliability; an absolute punctuality level of 94% is claimed, and this claim is supported by the Study Team's own observations.

However, on-train service standards have been observed to show a lack of consistency, specifically, in the area of the use of the on train public address system.

### 9.1.2.2 Competition

PKP Intercity faces competition mainly from road transport. However, because of the present under-developed situation of the Polish road network, PKP Intercity is still able

to offer competitive journey times. The main public transport competition comes from the private Polski Express Company, although this company's service frequency is also inferior to that on PKP Intercity. Domestic air service in Poland is very limited and currently presents little competition.

In the longer term, the continued expansion in car ownership coupled with provision of an improved road network may be seen as posing a significant threat to PKP Intercity, even in the market for long-distance travel.

### 9.1.2.3 Actual Service

The total daily train service offered in the current timetable, excluding a limited number of seasonal services, comprises:

- 14 Eurocity (EC) services, all operating on an international basis
- 32 Intercity (IC) services, two of which operate internationally
- 56 Express, (Ex) trains
- 12 Night Trains

Some of the above services operate on five or six days of the week only.

The express (Ex) network operates over the same main routes as Intercity (IC), but also provides services to a somewhat wider range of destinations (including, for example Białystok, Kolobrzeg, Przemysl, and Zakopane).

The international day services are to a large extent extensions of the main network (the Warsaw – Berlin service, for example, is integrated into the Warszawa – Poznań interval timetable).

The network as described above has been somewhat reduced in size in recent years and a further slight contraction is being forecast for future years.

At the same time, there have been a number of positive service developments. These include the following.

- Introduction of a number of air-conditioned coaches on selected services.
- Introduction of the "hotel train" concept for night services on a number of international links (e.g. Warszawa – Vilnius).

### 9.1.2.4 Indicators of Train Operation Work

The traffic data covers four months in 2001 and the whole of 2002. The indicators show that the passenger traffic is not blighted.

**Table 9.1.6 Indicators of Train Operation Work of PKP Intercity**

Specification			Average daily
Number of train - kilometers	2001	7,120,162.00	58,361.98
	2002	21,065,684.00	57,714.20
Average number of wagons/train	2001	8.50	
	2002	7.90	
Number of wagon-kilometers	2001	60,298,871.94	494,253.05
	2002	166,067,808.87	454,980.30

Note 1: Data source is PKP Intercity

Note 2: Data in 2001 are for 4 months

Indicators of train work in 2001 and 2002

### 9.1.2.5 Train Performance on Main Lines

There is a significant problem with the uncompetitive nature of some of the journey times provided by the company. In particular are the journey times that have been lengthened in recent years due to the increasing backlog in infrastructure maintenance.

This particularly applies to the Warszawa – Gdańsk route, where 15% of traffic has been lost over a period of five years.

(1) Trains of PKP Intercity are forced to withdraw from many sections for the following reasons.

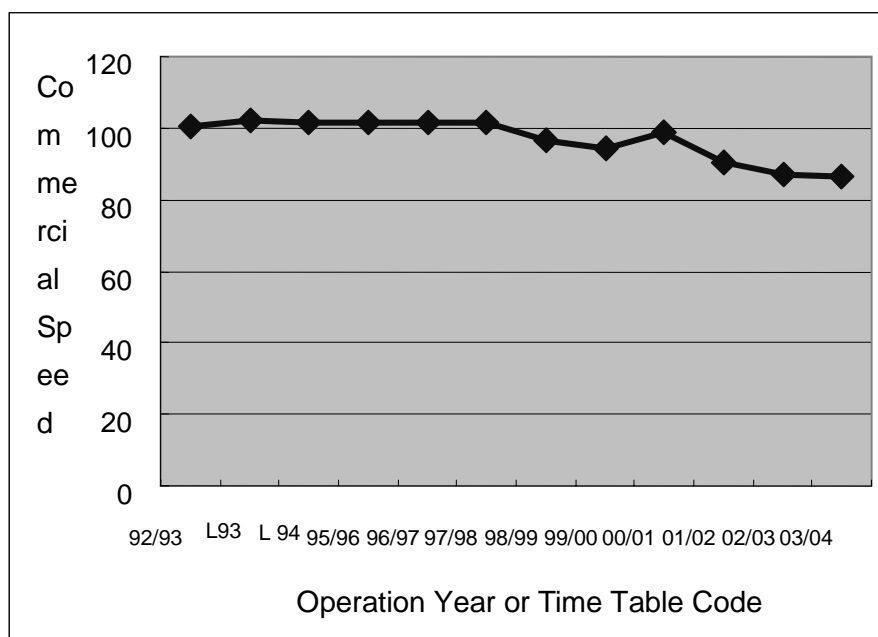
- Competition from cars and buses
- Economic depression in some areas
- Speed reduction policy caused by the lack of track maintenance

In particular, the total train speed on the line between Gdańsk and Warszawa is problematic and the train speed near Warszawa area is extremely slow. The train speed between Gdańsk and Warszawa Central is reduced and train travel time has been increased from 3 hours and 10 minutes to 3 hour and 45 minutes.

The track curvature figures for PKP are comparatively good. The curvature will decide the train speed and the improvement costs for future development of EU standard high-speed projects. These track figures are a treasure of Poland.

(2) Need for train speed improvement

Recovery of the train speed to its former state is the first target. The second target should be set to rise up speed within 3 hours, by introducing new rolling stock.



**Figure 9.1.1 Transition of Train Speed between Warszawa and Gdańsk**

But the current trend is towards slower speed. This is because of the attempt to save on track maintenance costs.

The main item of EU policy is identifying ways to further utilize the railway transport through increased transport speed, and thereby using it as a means of meeting CO<sup>2</sup> gas emission targets.

Very specifically, train speed is the measure of PKP Intercity's competitiveness with road transport.

In the following, the actual speeds and the transition of train speeds are shown.

### (3) Train performance on major PKP Intercity lines

a) On line CMK 100 between Warszawa and Katowice-Krakow

**Table 9.1.7 Speeds of Major Trains between Warszawa and Katowice**

EuroCity 131

	Distance (km)	Time (hr. min)	Travel Time (min.)	Speed from WW (km/h)	Distance between stations (km)	Speed between stop stations (km/h)
Warszawa Wschodnia	0	7.41	0	0.0	0.0	0
Warszawa Centralna	5	7.55	14	21.4	5.0	21.4
Katowice	302	10.24	163	111.2	297.0	119.6

InterCity 1401

	Distance (km)	Time (hr. min)	Travel Time (min.)	Speed from WW (km/h)	Distance between stations (km)	Speed between stop stations (km/h)
Warszawa Wschodnia	0	14.41	0	0.0	0.0	0
Warszawa Centralna	5	14.55	14	21.4	5.0	21.4
Sonsnowiec	294	17.15	154	114.5	289.0	123.9
Katowice	302	17.28	167	108.5	297.0	116.5

Note: Calculated by this paper

Data resource: Train time table of PKP 15.12.2002 - 13.12.2003

**Table 9.1.8 Speeds of Major Trains between Warszawa and Krakow**

Intercity 1301

	Distance (km)	Time (hr. min)	Travel Time (min.)	Speed km/h from WW (km/h)	Distance between stations (km)	Speed between stop stations (km/h)
Warszawa Wschodnia	0	6.46	0.00	0.00	0.00	0.00
Warszawa Centralna	5	7.00	14.00	21.43	5.00	21.43
Krakow	297	9.35	169.00	105.44	292.00	113.03

IC 5302

	Distance (km)	Time (hr. min)	Travel Time (min.)	Speed km/h from WW (km/h)	Distance between stations (km)	Speed between stop stations (km/h)
Warszawa Wschodnia	0	11.35	0.00	0.00	0.00	0.00
Warszawa Centralna	5	11.50	15.00	20.00	5.00	20.00
Krakow	297	14.25	170.00	104.82	292.00	113.03

Note: Calculated by this paper

Data resource: Train time table of PKP 15.12.2002 - 13.12.2003

The history of train speed on CMK 100 line is relatively stable, but also has not shown any improvement.

Improvement of running times in the central part of Warszawa west-Warszawa Central-Warszawa east section is very important for increasing travel speed between Warszawa Central and Katowice and Krakow.

Only PKP Intercity trains run on the CMK 100 line, which starts in Warszawa and arrives at Katowice or Krakow. The following figures show the trains by one way travel. The types of trains on CMK 100 line are shown in the following table.

b) On line 300 between Warszawa and Rzepin

On line 300 between Warszawa and Rzepin run various kinds of trains. The running

trains are for Eurocity, Intercity, Express, Fast trains as well as ordinary trains. In the future, these trains will be organized to be more beneficial. Accordingly, longer distance and higher speed trains will run on this major trunk line. (Refer to Attachment 9.1.1 in detail.)

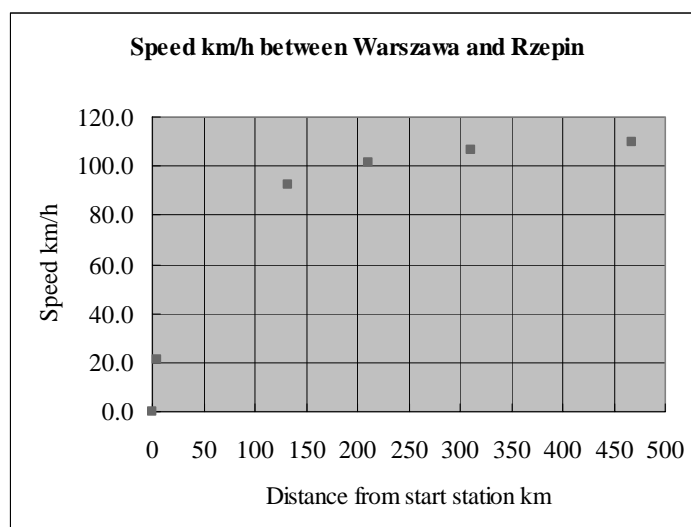
**Table 9.1.9 Speed of Major Trains on line 300**

EuroCity 46	Distance from start station km	Hr. min	Time min	Speed km/h from WW	Distance between stations km	Speed km/h between stop stations
Warszawa Wschodnia	0	7.15	0	0.0	0	0
Warszawa Centralna	5	7.30	15	20.0	5	20.0
Kutno	132	8.42	87	91.0	127	105.8
Konin	211	9.21	126	100.5	79	121.5
Poznan	311	10.11	176	106.0	100	120.0
Rezpin	467	11.31	256	109.5	156	117.0

EuroCity 44	Distance from start station km	Hr. min	Time min.	Speed km/h from WW	Distance between stations km	Speed km/h between stop stations
Warszawa Wschodnia	0	11.16	0	0.0	0	0
Warszawa Centralna	5	11.30	14	21.4	5	21.4
Kutno	132	12.42	86	92.1	127	105.8
Konin	211	13.21	125	101.3	79	111.4
Poznan	311	14.11	175	106.6	100	120.7
Rezpin	467	15.31	255	109.9	156	118.2

Note: Calculated by this paper

Data resource: Train time table of PKP 15.12.2002 - 13.12.2003



**Figure 9.1.2 Train Speed between Warszawa and Rzepin**

## c) 400 line (between Warszawa and Gdynia)

The section length between Warszawa and Gdansk is approximately 330 km, but the too slow train speed, overall service is rather poor. There are very few direct-connection trains operating between Warszawa and Gdansk. When the train speed is recovered and then improved, the major long-distance trains can be operated in less than 3 hours. This fast speed will attract much more passengers, which will in turn transform actual train scheduling. (Refer to Attachment 9.1.2.)

**Table 9.1.10 Speed of Major Trains on 400 line between Warszawa and Gdynia****Intercity  
3501**

	Km	hr. min	Time min.	Speed km/h from WW	Distance between stop stations km	Speed km/h between stop stations
Warszawa Centralna	4	8.47	0	0.0	0	0.0
Warszawa Wschodnia	9	8.57	10	30.0	5	30.0
Hawa Glowna	213	11.13	146	85.9	204	90.0
Malbork	282	11.59	192	86.9	69	90.0
Gdansk Glowny	333	12.41	234	84.4	51	72.9

**Intercity  
1501**

	Km	hr. min	Time min.	Speed km/h from WW	Distance between stop stations km	Speed km/h between stop stations
Warszawa Zachodnia	0	16.31	0	0.0	0	0.0
Warszawa Centralna	4	16.47	16	15.0	4	15.0
Warszawa Wschodnia	9	17.00	69	7.8	5	5.7
Gdansk Glowny	333	20.43	252	79.3	324	106.2

**Intercity  
3503**

	Distance from start station km	hr. min	Time min.	Speed km/h from WW	Distance between stop stations km	Speed km/h between stop stations
Warszawa Centralna	4	17.47	0	0.0	0	0.0
Warszawa Wschodnia	9	17.57	10	30.0	5	30.0
Hawa Glowna	213	20.13	146	85.9	204	90.0
Malbork	282	20.58	191	87.3	69	92.0
Gdansk Glowny	333	21.40	233	84.7	51	72.9

Team calculated

Data resource: Train time table of PKP 15.12.2002 - 13.12.2003

## d) On other lines of PKP Intercity

Generally speaking, the train speed on other PKP Intercity is between 65 km/h and 95 km/h. This speed is far from the EU standard. If Government has a policy of railway utilization on limited lines, the train commercial speed should be improved promptly by putting the accent on the selected lines.

	Gdansk	Lodz	Krakow	Wroclaw	Poznan	Szczecin	Bydgoszcz	Lublin	Katowice	Bialystok	Czestochowa
Warszawa	3h 50m 85.7	1h 46m 75.1	2h 35m 113.2	4h 28m 86.1	2h 34m 119.1	5h 14m 99.4	3h 08m 92.1	2h 11m 80.3	2h 31m 117.9	2h 23m 77.3	2h 53m 79.9
		Gdansk 5h 49m 66.8	6h 40m 93.1	5h 55m 80.7	3h 52m 80.8	5h 05m 73.6	1h 51m 87.1	6h 26m 78.4	6h 45m 92.7	7h 02m 73.1	6h 51m 81.6
		Lodz	3h 14m 87.6	3h 18m 73.6	2h 53m 85.8	5h 40m 81.3	3h 29m 65.8	4h 28m 68.9	2h 52m 85.7	4h 32m 70.1	1h 47m 84.8
			Krakow	3h 42m 72.4	5h 42m 76.1	8h 19m 77.8	6h 57m 82.1	4h 31m 76.3	1h 10m 66.7	5h 15m 90.7	1h 51m 70.2
				Wroclaw	1h 48m 91.7	4h 22m 86.7	4h 08m 77.1	6h 48m 82.4	2h 19m 81.9	7h 29m 76.1	2h 51m 62.1
					Poznan	2h 24m 89.2	2h 13m 68.9	4h 56m 97.6	4h 21m 81.6	5h 32m 88.6	5h 39m 70.4
						Szczecin	3h 55m 70.2	7h 37m 91.2	7h 00m 81.3	8h 03m 87.5	7h 38m 72.9
							Bydgoszcz	6h 16m 73.8	5h 59m 96.2	6h 20m 74.6	5h 57m 63.9
								Lublin	5h 12m 90.8	4h 36m 75.9	5h 58m 67.8
									Katowice	5h 52m 81.9	1h 10m 74.1
										Bialystok	5h 47m 84.7

Figure 9.1.3 Fastest Journey Time of Major Line Sections

## 9.1.2.6 Speed up Program and its Preparation

## (1) Speed up program

Polish Government is preparing a project to realize 160-200 km/h and 200-250 km/h operation.

When trains reach speeds of more than 160km/h., it will be necessary to delete level crossings from these high-speed zones. For safety, the new signal system including cab signal and interlocking system should be prepared. In addition, it is recommended that the a new centralized train control system replace the current one.

Based on this point of view, JICA study team prepared a rolling stock replacement plan utilizing 160-200 km/h EMU train sets.

## (2) The preparation for higher speed program

The preparation itself gives a bright prospect for PKP Railway innovation. The retreat plan in the railway local transport is very important but the long-range plan which gives the hope to utilize the actual railway system.

The portion of high-speed railway lines is small when compared to the enormous railway network, but still it gives a big chance to recover the income structure. In case



of JR (Japanese Railway), the 500 km Tokaido Shinkansen provides the major income for the entire 2000 km network. The income from the Tokaido Shinkansen supports the management of Central Japan Railway Company principally.

The Intercity is only operating only 125 trains but still gains 697,972,000 PLN. That equals approximately 50 % of all net income of PKP Regional, demonstrating that the high-speed railway has a possibility to be the supporting financial business for the PKP group.

### **(3) Rolling stock**

The replacement plan of PKP Intercity rolling stock includes the possibility of introducing a test run of 200 km/h operation before 2010. After completing the track improvements, commercial service of 200-250 km/h will begin.

## **9.1.3 Marketing Issues**

### **9.1.3.1 Service Quality Issues**

As mentioned above, the company operates its services to a high standard of punctuality and reliability. However, there are clear deficiencies in the field of rolling stock (see Section 9.1.4 below).

Another significant problem in the current situation relates to the environment of the stations. It is clear that there has been substantial under-investment in station facilities over an extended period, and many stations used by PKP Intercity present an image which falls below market expectations.

### **9.1.3.2 Market Knowledge**

In June 2002, the company commissioned a market research study. Undertaken by an external agency (but one closely linked with the railway), it was aimed at obtaining a broad client typology. It also sought reaction to a number of potential service developments, particularly in the area of pricing. The questionnaire covered such questions as:

- journey purpose,
- reason for deciding to travel by train,
- frequency of travel,
- type of ticket held, and
- availability of alternative travel mode.

A further limited survey undertaken in June 2003 sought opinions on client rating of intercity services.

### **9.1.3.3 Tariffs and Prices**

For its domestic traffic, PKP Intercity operates exclusively on the highest of the three levels of the PKP passenger tariff system: the Express tariff; special tariffs apply to international traffics. The structure of the tariffs is on a strict kilometre-band basis, with no scope (other than through commercial discounts) for reflecting “market prices” to individual destinations.

A compulsory reservation system operates on all trains and the payments made for reservations (ranging from PLN 9 to PLN 18 per single trip) represent additional revenue for the company.

The company is obliged by law to offer a range of fare discounts. An analysis of carryings for the first 11 months of 2002 showed some 21% of its passengers as travelling on such discounts. The state compensation received for 2002 in respect of revenue lost through these arrangements (fixed by the government at only 68% of the total amount that would in principle be due) was PLN 25.3m. The company receives no other payment from the state. (Refer to Attachment 9.1.3)

PKP Intercity is free to develop and introduce any commercial discount offers which it may judge to be beneficial to its business. In practice, the main current offerings, such as discounts for group travel, seniors and students, were introduced before the division of the passenger business into two companies, and are therefore identical with those of Regional. The company has, however, developed a number of discounts which are particular to its own services so there are reduced fare offers available to all travellers on selected international routes as well as for “last minute” reservations on sections of the domestic network. The analysis referred to the above shows some 13% of passengers as travelling under commercial discount arrangements.

Because PKP Intercity operates under a separate tariff, and has a compulsory reservation system, there is in general no difficulty in ensuring accurate identification of revenue due to the company. Revenue for some ticket types is shared on an equal basis with PKP Regional. These include the network season tickets available within Poland, and also most of international tickets.

Information on ticket sales analysis, carryings and revenues for each month is generated from the sales system administered by PKP Informatyka, and is received by PKP Intercity management within 10 days of the month end. Analysis of international passenger carryings is received with 4 months’ delay due to the need to await information from other countries.

### **9.1.3.4 Ticket Sales Patterns**

PKP Intercity has its own ticket sales outlets at eight major stations only, but PKP Intercity tickets can be bought also at ticket offices manned by PKP Regional personnel, through access to the common sales and reservation systems, and through appointed agencies. The market research undertaken in 2002 revealed the breakdown of outlets used by customers for purchase of PKP Intercity tickets to be as follows:

- 15% through the company’s ticket offices

- 48% through ticket offices of PKP Regional
- 32% through external travel agencies
- 5% on-train sales by conductors.

At present, no other types of sales outlets are employed. It is possible to make reservations and book tickets via the company's website, but the associated documents have to be collected (and paid for) at a station or on a train.

#### **9.1.3.5 Organizational Aspects of Marketing**

The company's marketing work is mainly centralised in its headquarters, with only a limited marketing function devolved to the regional offices. The marketing section at headquarters comprises a director plus eight others, and contains the following sections:

- strategy and research,
- service planning
- promotion and publicity, and
- international co-operation.

Other work of relevance to the total marketing activity is undertaken by the sales and tariffs sections. The main responsibilities of the sales section cover the overall control of standards of service provided by the company's own booking offices, ticket-selling agencies (including those of the regional company) and information centres.

The heads of marketing, sales and tariffs report to the company's commercial director.

#### **9.1.3.6 Specific Major Issues Affecting Marketing Activities and Outcomes**

The following are seen as being the major issues affecting the company's marketing capability and effectiveness.

- The absence of a clear structure for the management of individual routes within the company's network. Since this network consists of a limited number of routes, with different competitive situations applying to each, it should be possible to provide a clear focus for the management of each.
- The lack of adequate marketing and promotional budgets. A promotional budget of PLN 400,000 has been made available for the current year to cover advertising, market research and support for new services. The original submission had been for a substantially higher figure than this.
- A need for more detailed understanding of the company's markets, to be gained through an enhanced program of market research and analysis. (It is nevertheless appreciated that some useful research information has already been gained, as described above, during the company's brief existence.)

- The desirability of action to ensure stronger establishment of the company corporate identity. A successful identity has been created but further reinforcement is called for.
- The advisability of improving “accessibility” to the system for prospective clients, particularly with regard to provision of information and ease of ticket purchase. The former, in particular, has been shown by market research to be rated poorly by PKP Intercity clients.
- The need to establish a clearer distinction between the levels of product offered by the company, in particular between IC/EC on the one hand and Ex on the other. This distinction is believed to be less than adequate under the company’s present operating patterns.
- The need for an improvement in the condition of the majority of the rolling stock owned by the company, as mentioned above – especially the older elements of both day and night stock.
- Improvement of the unsatisfactory standards of service at stations, given that the service provided at stations forms a significant part of the total journey experience (see Section 9.3 below).
- The need for development of better and more consistent standards of service on board the company’s trains. On-train service standards have been observed to show some lack of consistency, in particular with regard to use of the on-train public address system.
- Investigation of a more flexible approach to the tariff structure and of test marketing of innovative types of commercial discounts.

#### **9.1.4 Rolling Stock**

The need exists for an improvement in the condition of the majority of the rolling stock owned by the company, as mentioned above – especially the older elements of both day and night stock.

The operation method of PKP Intercity trains are of locomotive hauled system that necessitates substantial lost time at terminal stations when compared to EMU.

The older stock (which forms the large majority) lacks some of the features that are now considered normal on European long-distance train services, such as air conditioning and closed toilet systems. It also provides accommodation in compartments only. The newest day stock is satisfactory, and provides a mix of compartment and saloon accommodation.

The night service stock is in general less satisfactory, although refurbished sleeping cars will be delivered shortly for use on the planned new Krakow – Kiev night service.

Some 50 % of rolling stock of PKP Intercity will be replaced by new by 2010. The rolling stock of passenger coaches hauled by locomotives will be changed to EMU type cars because they offer benefits such as: efficiency of rotation, less energy consumption,

lower track maintenance cost, the potential for travel time, and others. This matter will be introduced more concretely in Section 9.2.1.

**Table 9.1.11 Age Structure of Rolling Stock**

Type of wagon	Division by age						Total	Average age in years
	1-5	6-10	11-15	16-20	21-25	26-30		
	Number of wagons							
1st class, with seats	13	54	60	66	31	0	224	13.9
2nd class with seats	36	86	254	108	4	1	489	12.6
Restaurant	0	0	16	0	0	80	96	25.4
Passenger and luggage	0	0	0	0	30	0	30	21.5
Social	0	0	0	0	0	1	1	29
Sleeping	1	1	0	49	148	49	248	22.2
Berth cars	0	0	14	0	0	229	243	27
for car transport	0	0	0	0	0	9	9	27.8
Total	50	141	344	223	213	369	1,340	18.4

Note: Data source is PKP Intercity

## 9.1.5 Preparation for the Open Access

### 9.1.5.1 Laws and Regulations

The accession of the EU has brought about new Law on Railway Transportation (March 28, 2003), which replaced old Law on Railway Transportation (June 27, 1997).

More than half of its articles is the related to the newly established Railway Transport Office (UTK).

The main reason for the revision of the law was the financial crisis of PKP Regional. PKP Regional fell into insolvency in 2002.

### 9.1.5.2 Backlog and Inefficiency

The maintenance backlog has effects not only on the track and rolling stock, but also on the way of operating the system. This backlog appears as inefficiencies in train operation.

Inefficiency can be seen in the train diagram that lowers train commercial speed. This causes the decrease of passenger volume and the increase of train operation cost.

## 9.1.6 Track Condition

PKP Intercity should press for infrastructure improvements to achieve reduced journey times (in particular where such journey times have grown worse in recent times), setting clear priorities for the implementation of improvements and the journey times/capacity increases which it desires to achieve. It may even be appropriate, subject to close analysis, for the company to provide a financial contribution to such

investment.

The train speed of main lines is limited its present low level because of the desire to reduce track maintenance costs and is not related to the commercial operation of operating companies.

The train speed should be increased from the view point of increase of track usage too. The income from operation companies will be the most important income resource of PLK.

## 9.2 SOLUTIONS

### 9.2.1 Replacement of Rolling Stock

An ongoing program of new rolling stock acquisition should be developed, and the possibilities leasing rather than purchasing this stock should be investigated. Current plans for stock refurbishment should be allowed to continue.

By the year 2010, some 50 % of rolling stock of PKP Intercity will be replaced to new ones with the capability of 160-200 km/h travel speed. The rolling stock of passenger coaches hauled by locomotives will be changed to EMU type cars because they offer benefits such as: efficiency of rotation, less energy consumption, lower track maintenance cost, the potential for travel time, and others.

After 2010, high-speed programs will be introduced to realize 200-250 km/h. To that end, study will be started prior 2010 that investigates: removing level crossings, constructing new line sections on the dense-operation section near Warszawa, new signal control system for route control, interlocking system, car automatic operation system, and others.

Fundamental system changes will be required for realizing the 200-250 km/h operation. In this report, for first stage of 2006-2010, the higher quality rolling stock that can be used in the future system is presented into consideration.

PKP Intercity will aim at realizing maximum profit by improving the train running speed through the modernization of rolling stock, train control and operation system.

At the present time the company is operating at a slight deficit. However, given the current and potential demand, determination by PKP Intercity to maximize profits can result in maximum profit just as it has in numerous other advanced countries.

Generally speaking, the realization of 200-250 km/h will be achieved after the completion of 160-km/h program by 2010. With proper planning, the level-crossings can be removed without major problems. The replacement work will be done during the implementation of the EMU 160-200 km/h service.

The preparation work for the 200-250 km/h operation will continue in parallel with the replacement of locomotive-hauled train systems by light EMU with the implementation of 160-200 km/h running.

**Table 9.2.1 Replacement of Rolling Stock**

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cars to be replaced by new ones	369					213			
Car replacement with target 50%	<u>0</u>	<u>0</u>	<u>110</u>	<u>110</u>	<u>110</u>	<u>110</u>	<u>110</u>	<u>110</u>	<u>0</u>
car for supplement			20				20		
Total car number to be invested	<u>0</u>	<u>0</u>	130	110	110	110	130	110	0
Amount of car investment (million PLN) yearly	<u>0</u>	<u>0</u>	260	220	220	220	260	220	0
Accumulated car investment (million PLN)	<u>0</u>	<u>0</u>	260	480	700	920	1,180	1,400	1,400
1 EMU Car price = 2.0 million PLN									
New car number	0	0	130	240	350	460	590	700	700
Conventional car number	1340	1340	1230	1120	1010	900	790	680	680

Data source: Study team

## 9.2.2 Marketing Actions

Regarding ticket sales activities, there must be a system that allows passengers to buy tickets easily at station counters or through city travel agents. One of the main competitors of PKP Intercity, Polish Airline (LOT) has already started its own FFP (Frequent Flyers Program) system in order to develop customer services. PKP Intercity should also open a wide-ranged sales networks, including through the Internet, as part of its customer development program and as a method for establishing two-way communication between PKP Intercity and its customers. Furthermore, it is very important to introduce ticket discount services that meet the needs of frequent customers.

The Study Team believes that the solutions to the marketing issues above are likely to be found through the following approaches.

- Appoint a route manager for each of the company's principal routes. It is suggested that this may be achieved within the existing management structure, as an "overlay" to existing responsibilities.
- Provide enhanced marketing and promotion budgets to ensure that the PKP Intercity brand name is clearly established as synonymous with high standards of rail service and travel. An allocation of 0.5% of revenue – hardly generous by general marketing standards – would make available some PLN 2.5m, some six times the current figure. Comprehensive promotional and communications plans will need to be established to make effective use of the enhanced budget availability.
- As part of the above, a detailed program of market research should be drawn up. Unlike research undertaken to date, this should be partly focused on those who are

not already users of the company's services.

- Develop a continuing "roll-out" program for application of the company corporate identity. Particular attention needs to be paid to how it can most effectively be applied at stations.
- Educate the passengers about the various levels of service. Under current operation, little distinction is perceived in the standards of service. In particular there is little distinction about journey speeds and rolling stock used (it has been observed that some of the company's latest air-conditioned stock regularly appears in Ex train sets). Alternatively, the company may wish to consider whether the differentiation, and the small difference in reservation fee, carries any real market value.
- Implement an enhanced staff training program to improve the delivery of on-train services. Detailed standards should be drawn up, and widely communicated, detailing the levels of service to be provided. Plans should also be drawn up for service enhancement on prestige services (e.g. free provision of newspapers, others).
- Test new discounting schemes. The Study Team is aware of recent innovations in the area of commercial discounts, but believes there is scope for further experimentation through test marketing. Research undertaken in 2002 showed that there was substantial market interest in an APEX-type arrangement that offers cheaper fares in return for an advance purchase requirement.
- In the context of increasing tourism to Poland, the company should consider further how it can best develop its approach to the tour operator market, with regard to both international and domestic journeys.
- The company should press for improvement to standards at stations (see Section 9.3) and in infrastructure conditions (Section 9.4.3).

### **9.2.3 Access to the Improved System of Ticket Information, etc.**

As stated above, market research has shown that the area of access to the company's services, namely ticket purchases and information provision, is currently not well regarded by customers. The Study Team proposes three specific areas for early action to improve system accessibility:

- Upgrading of the company's website, which already allows for seat reservation (with payment of the fee at station or on train) to include the ability to buy both tickets and reservations on line with payment by credit card. The company has stated that it envisages undertaking such development and it is recommended that it be pursued with all possible speed. There is clear evidence that the use of credit cards in Poland is expanding steadily, especially among those most likely to be PKP Intercity customers.
- Experimental installation of automatic ticket/reservation vending machines at selected stations, with cash or credit card payment options, should be implemented. Ideally, such machines would be able to provide travel/journey information also.



- Consideration of a system would allow change of reservation without further payment. The present situation (where no such change is allowed) may be seen as lacking in customer-friendliness.

#### **9.2.4 Acquisition of Finance**

As the case of PKP Regional, the finance condition is not enough to clear the accumulated backlog of rolling stock in the past time.

Fundamentally the acquisition of fund to solve the rolling stock backlog should be supported by the government.

##### **9.2.4.1 Utilization of EU Funding**

One idea is utilizing the EU funding to solve backlog of rolling stock of passenger companies. That could be realized as for the actual fund for railway infrastructure innovation by adding 25% government capital.

##### **9.2.4.2 Tax Exemption During Reconstruction Period**

Exemption of tax for PKP Intercity during the reconstruction period (until 2010) is another possibility. The resulting funds realized by PKP Intercity by a tax exemption could be used for removing accumulated backlog of rolling stock.

### **9.3 RECOMMENDATIONS**

#### **9.3.1 Improvement of Station Facilities**

As stated above, the conditions at stations form a very important part of the total rail journey experience, and it is acknowledged by all concerned that the current situation is much less than satisfactory. However, obtaining significant improvement will depend on obtaining the cooperation of the other parties involved – PKP SA Real Estate in the case of main station buildings and PLK in the case of platform structures and buildings.

In order to achieve the necessary improvements, the company should exert pressure for the rapid enhancement of standards at stations, setting a clear program of priorities and defining the results the programs are intended to achieve. It should also investigate the feasibility of providing specific “reception areas” for PKP Intercity clients at selected major stations.

The need for improvements to be achieved at Warszawa Central station should be regarded as having particularly high priority, given the fact that some 80% of the company’s passengers pass through that station. There is a requirement for improved facilities at both main hall and platform level.

#### **9.3.2 Journey Time Analysis and its Influence**

- PKP Intercity should press for infrastructure improvements to achieve reduced journey times (in particular where such journey times have grown worse in recent times), setting clear priorities for the implementation of improvements and the journey times/capacity increases which it desires to achieve.

- Shortening journey time will reduce the operating costs by increasing efficiency.
- Shortening journey time will increase passenger traffic demand.

It may even be appropriate, subject to close analysis, for the company to provide a financial contribution to such investment.

(Refer to Attachment 9.4 for details.)

### **9.3.3 New Concept of PKP Intercity Train Operation**

- An ongoing program of new rolling stock acquisition should be developed, and the possibilities leasing rather than purchasing this stock should be investigated. Current plans for stock refurbishment should be allowed to continue.
- Regular interval time table will be introduced for the major lines.

## CHAPTER 10 PKP CARGO

### 10.1 PRESENT SITUATION AND ISSUES

#### 10.1.1 Present Situation of PKP Cargo S.A.

PKP Cargo is the largest company in the PKP Group, and plays a key role in the development and maintenance of the railway system in Poland.

The organization is now facing both external and internal pressures – the external represented by depressed transport demand and the internal by the shouldering of significant amounts of excess and deteriorated assets transferred from the old PKP.

In this section, we take first a general view of PKP Cargo's condition through the following two aspects:

##### (1) Transport business aspect

The total transport volume handled by the old PKP and PKP Cargo has fallen in each year since 1985, with only some minor exceptions. According to forecasts of future demand, furthermore, the total volume for all transport modes in Poland is not expected to increase drastically over the next few years.

Even though hard coal, as a commodity providing over 50% of the total of rail freight traffic (on a ton basis), has been the mainstay of Polish railway freight transport, there is some uncertainty as to whether this situation can continue in the future.

Meanwhile, the country's EU accession will have important implications for the rail freight transport business in Poland, for which careful preparation is required.

A further factor to note is that the company earns significant amounts of revenue from the hire of locomotives and drivers to PKP Intercity and PKP Regional. Any downsizing of the activities of these two companies would thus pose a threat to Cargo's profitability.

The company faces growing competition, both from the development of road haulage and from the other licensed rail freight operators; there are currently 22 such companies licensed to operate on the PKP network, though the volume of traffic handled by them is not very significant at this stage.

Additionally, the company must face the threats posed by the Open Access implications of EU accession. Under the provisions of the accession agreements, 20% of the PKP main route network is subject to Open Access operation with effect from 01 May 2004, and the whole network from 01 January 2007.

In general, competition from road haulage is likely to become fiercer over the coming years as the country's road network develops. The company needs to take full advantage of the comparatively slow pace of this development.

In summary, PKP Cargo has to be prepared to undergo substantial change in the near

future.

## (2) Internal company issues

At the present, PKP Cargo possesses a substantial amount of deteriorated and redundant assets, as well as surplus employees, transferred from the old PKP at the time of commercialisation. These give rise to low productivity and increased cost, even though PKP Cargo gained a profit from business activity in its first full year, 2002.

Meanwhile, sluggish demand and commodity changes in the transport demand will affect the company, as mentioned above. Therefore a fundamental change of direction is required within PKP Cargo, aimed at turning the organization into an integrated logistics company able to compete in European and other countries.

In order to re-structure the company's management and business systems, especially with regard to improving the condition of deteriorated assets transferred from the old organization, some governmental assistance may be required, through taxation, regulation or subsidy as appropriate.

Under these circumstances, PKP Cargo will need to reform its management and sales systems while it is still supported by a comparatively stable transport volume of hard coal.

In particular, PKP Cargo has obtained a transition period until 31 December 2006 before accepting in full the international freight transportation system regulated by the Trans-European Rail Freight Network (TERFN) through EU Directive 12. However, it is expected that many foreign freight carriers will seek to enter the Polish market sooner or later, so that PKP Cargo will have to take positive action in order to survive in cooperation and competition, with them while competing with other freight transport modes.

### **10.1.2 Marketing Aspect**

Legislation covering the activities of the company places some restrictions on its ability to act commercially, in particular with regard to its capability to refuse unprofitable traffics. Such restrictions no doubt arise from a situation in which PKP was virtually a monopoly carrier; in the competitive environment outlined above, this is surely no longer the case.

#### **10.1.2.1 Traffic Analysis**

The company carries some 60% of its traffic on a trainload basis, and thus has a considerable ongoing involvement in provision of service for single wagon loads. The proportion of trainload traffic is said to not to have increased substantially over recent years.

For the year 2002, a broad analysis of the company's total tonnage carried (155.0 million tonnes) shows the following split of carryings:

- 58% domestic freight

- 27% export
- 12% import
- 3% transit.

Export traffic is divided approximately equally between freight hauled to a port for transshipment to ship, and that forwarded by rail wagon throughout. The large majority of import traffic crosses a land frontier.

A significant proportion of non-bulk carryings is handled by PKP Cargo through the medium of forwarders. The company regards its relationship with forwarders as being generally positive, in particular because it provides an assurance of prompt payment; on the other hand, it does make understanding of the end customer's requirements more difficult.

While much of the traffic carried is on a siding-to-siding basis, PKP Cargo does offer a full door-to-door service for clients without siding facilities. The company does not have its own road fleet, but contracts with a number of transport companies to provide the road collection and delivery element.

#### **10.1.2.2 Tariffs and Pricing**

In common with all the licensed rail freight operators, the company is obliged by law to have a published tariff and regulations, which are in the public domain. There is, however, substantial freedom to depart from the published tariff, which the company views as purely a "starting point" for client negotiation.

At the same time, the company has at all times to pay close regard to the requirements of the Competition Commission, which seeks to ensure that "identical" clients are treated on an identical basis. Staff negotiating with customers have to be very aware of the implications of this.

The company believes that it has a "price leadership" role in the freight market, with road operators tending to set prices at a level slightly below the published rail tariffs. The company is, however, in general confident that its quality of service enables it to command a slightly higher price – even where no use is made of the flexibility that exists within the tariff structure.

#### **10.1.2.3 Marketing Structures**

Sales and customer service work with respect to major customers is undertaken by commodity-based teams, belonging to the Headquarters organisation, and located close to the customers whom they serve (the coal team, for example, is based in Katowice).

The sales/customer service teams report to the Commercial Director, and are supported by centralised teams, reporting to the same Director, covering such areas as:

- \* Marketing and customer services
- \* Marketing planning and analysis.

Smaller clients are dealt with through the network of 23 regional offices. In practice, around 75% of the company's total tonnage is forwarded by companies covered by the Headquarters teams.

### **10.1.3 Trend of Freight Traffic**

#### **(1) Total Freight Traffic**

According to recent trends in domestic transport volume in Poland, all transport modes have been showing downward trends, and forecasters are reporting that no increases in demand in Poland can be expected over the next few years.

Table 10.1.1 shows the volume of freight traffic handled by each transport mode from 1990 to 2001.

Comparison of the total traffic tonnage in 1990 with that in 2001 shows a decrease of 328 million tones, approximately 20%. In the same period, railway transport volume fell by 115 million tones, or approximately 40%.

Over the same period, road transport, as the main competitor to rail, has also dropped by 220 million tones. However, the extent of the decline for road is lower, at only 17%.

In terms of ton-km transported, the total has decreased by 27% from 1990 to 2001; by this measure, rail traffic dropped by 43% but road traffic increased by 85%. This is because average length of haul for road traffic has doubled over the period, while that for rail traffic has remained static.

On a tonnage basis, market share calculation for each transport mode in 2001 shows 12.7% by rail and 81.4% by road, as against 17% by rail and 78.5% by road in 1990.

#### **(2) Railway Freight Traffic**

##### **1 ) Past Trend of Traffic by PKP and PKP Cargo**

Table 10.1.2 shows traffic trends from 1996 to 2002 for rail freight transport. The five principal commodities, which between them provided more than 76% of PKP Cargo's tonnage in 2002, are highlighted in this table.

The table shows that traffic has been fallen in every year except 1997. Even though hard coal is the predominant sector, with over 49% of total volume in 2002, this also shows a descending trend year by year.

Although several major commodities show the same level of decline that for coal is naturally most serious in tonnage terms.

It should be noted that these major commodities, including hard coal, are considerably influenced considerably by Government policy, so that there may be cause for concern about coal traffic decreasing further due to the national energy policy.

Against this descending tendency of total traffic by rail, freight carried by combined transport systems has been showing a gradually increasing trend.

Currently, PKP Cargo classifies its freight carryings by 19 commodity categories, which include combined transport and transit cargo. In Table 10.1.2, these are included in the "Other Commodities" category. These traffics are expected to continue to increase gradually.

**Table 10.1.1 Past Traffic Volume**

Traffic Volume (Mln ton)						
	1990	1995	1998	1999	2000	2001
Total	1,646	1,381	1,359	1,329	1,348	1,317
Railway	282	225	206	187	187	167
Road	1,292	1,087	1,077	1,068	1,083	1,072
Pipeline	33	33	41	43	44	45
Marine	28	26	25	23	23	22
Inland Waterway	10	9	9	8	10	10
Traffic Volume (Bn ton km)						
	1990	1995	1998	1999	2000	2001
Total	346	301	317	311	283	253
Railway	84	69	62	55	54	48
Road	40	51	70	70	73	74
Pipeline	14	13	18	19	20	21
Marine	207	166	166	164	134	109
Inland Waterway	1	1	1	1	1	1
Average Transport Distance (km/ton)						
	1990	1995	1998	1999	2000	2001
Total	210	218	233	234	210	192
Railway	297	307	299	297	291	287
Road	31	47	65	66	67	69
Pipeline	421	405	453	453	459	466
Marine	7,284	6,382	6,549	7,220	5,869	4,839
Inland Waterway	106	94	117	123	112	123

(Air freight traffic has been ignored.)

Source - Annual Report of PKP, PKP Cargo and Public statistic book of Poland (GUS). Figures quoted are totals for all rail freight operators.

Table 10.1.3 shows the ratios of traffic on domestic and international transportation. International traffic also shows a generally declining trend; however, there is reason to expect that this trend will be reversed, especially for transit traffic, due to the geographical location of Poland on major East-West and North-South freight corridors, and also to the country's impending accession to the EU.

Thus it is essential to undertake aggressive expansion of the international (combined) transport system as quickly as possible, while the existing major commodities such as black coal remain broadly at their present level, and especially so as not to fall behind road transport against the background of anticipated road network development in the country.

**Table 10.1.2 Past Trend of Railway Freight Traffic – PKP CARGO**

(Mln ton)

Freight product	Year						
	1996	1997	1998	1999	2000	2001	2002
Hard coal	109	108	95	88	82	80	76
Stone, sand, gravel	19	20	17	19	18	13	13
Metals and metal products	16	18	16	13	14	12	11
Oil & Oil products	12	13	13	14	13	12	11
Other chemicals	9	10	9	9	9	9	8
Other commodities	59	58	56	44	47	39	37
Total (Million ton)	224	227	206	187	184	163	155
Billion ton-km	68	69	62	56	53	46	45
Average Distance of haul (km)	306	303	299	297	288	282	290

Source - Annual Report of PKP , PKP Cargo and Public statistic book of Poland (GUS)

**Table 10.1.3 Freight Traffic by Category – PKP Cargo -**

(Mln ton)

	Year						
	1996	1997	1998	1999	2000	2001	2002
Domestic	147	146	127	119	114	99	90
Export	55	48	49	46	40	41	42
Import	23	25	27	23	24	19	18
Transit	6	6	5	4	5	5	5
Total	224	227	206	187	184	163	155

## 2) General Condition of PKP Cargo in 2002

In this section, transport business matter of PKP Cargo is focused briefly since the financial aspect of the company is given a detailed account in the other section of this report.

As shown in Table 10.1.4, the operating income amounts PLN 5,923 million and the revenue, PLN 375 million by transport volume, 155 million ton in 2002.

Unfortunately, some data of property owned by PKP Cargo have not been gathered in this report.

## 3) Forecast of Traffic Volume

According to analysis on freight transport demand which is described in this paper, total demand shall be increasing slightly in comparison with result of 2001, whether in pessimistic or optimistic one until 2010. As shown in Table 10.1.5, however, demand of railway freight transport is forecasted as very severe condition in the circumstances.



**Table 10.1.4 Specifications of PKP Cargo (2002)**

Item	Unit	Amount
Operation Income	PLN	5,923 Mln
Operation Cost	PLN	5,548 Mln
Operation Revenue	PLN	375 Mln
Net Profit	PLN	153 Mln
Transport Volume	Ton	155 Mln
Transport Work	ton-km	45 Bn
Train-km	train-km	73 Mln
Service Distance <sup>(note)</sup>	Km	18,550
Service Route <sup>(note)</sup>	line	405
Personnel	person	51,389
Rolling Stock		
Locomotive	car	3,816
Wagon	car	90,185
Leased Wagon	car	39,828

(note) Estimated by this paper

**Table 10.1.5 Freight Traffic Volume****PKP Cargo & Other Modes (Mln ton)**

Transport Mode	Year				
	2001	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Total	(100)	(100)	(100)	(100)	(100)
	1,317	1,351	1,400	1,334	1,403
PKP Cargo	(12.6)	(10.5)	(11.5)	(9.1)	(10.6)
	167	142	161	121	149
Others	(87.3)	(89.5)	(88.5)	(90.9)	(89.4)
	1,150	1,209	1,239	1,213	1,254

Table 10.1.6 shows commodity-basis traffic forecast for 2006 and 2010 in comparison with the result in 2002.

In this forecast, hard coal is decreasing surely in this period, especially in 2010 while other commodities are on the increase or levelling off. Therefore, it is very important to develop new commodities or general cargo rapidly while the rather huge bulk traffic is maintained.

Especially, even as railway freight transport it is required to aim at definitely tailor-made to meet the customer's preference: door-to-door and even just-in time transport to be involved in a manufacturing process.

**Table 10.1.6 Freight Railway Traffic – PKP Cargo**

(Mln ton)

Freight product	Year				
	2002	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Hard coal	76	63	71	52	63
Stone, sand, gravel	13	12	17	12	18
Metals and metal products	11	12	18	12	19
Oil & Oil products	11	12	12	12	12
Other chemicals	8	-	-	-	-
Other commodities	37	46	49	38	43
Total (Million ton)	155	142	161	121	149
Billion ton-km	45	42	45	35	41
Average Distance of haul (km)	290	296	280	289	275

In this table, total traffic (ton) summed up by each commodity is not equal to the total of each column because some part of the traffic by LHS is included in some commodities.  
Refer to the demand analysis in this paper in detail.

Table 10.1.7 shows railways role forecasted in domestic and international transport in the same period as that mentioned above by comparing with the result in 2001. Traffic in export drops in both pessimistic and optimistic estimations until 2010 at least.

This tendency occurs chiefly in international economic condition.

From this point of view, it is very indispensable to make efforts to develop domestic market for PKP Cargo. Furthermore, the same is also true for other categories through an intermodal system.

**Table 10.1.7 Freight Traffic by Category – PKP Cargo**

(Mln ton)

	Year				
	2002	2006		2010	
	Result	Pessimistic	Optimistic	Pessimistic	Optimistic
Domestic	90	76	99	66	96
Export	42	40	33	32	25
Import	18	21	24	18	23
Transit	5	5	5	5	5
Total	155	142	161	121	149

Inversion phenomenon between pessimistic and optimistic forecasts in the case of export appears in the analysis. That is why the larger traffic in export occurs in the total traffic that is smaller in each case, for example.

#### 10.1.4 Task of PKP Cargo

In this study, through discussions with PKP Cargo's staff, we recognized that the following are tasks to be performed urgently for accomplishing the privatization.

**Table 10.1.8 Four Major Tasks of PKP Cargo**

- |  |
|--|
| <ol style="list-style-type: none"><li>(1) Treatment of enormous deteriorated assets from the old PKP</li><li>(2) Cost reduction, TAC, Labor cost and Energy cost</li><li>(3) Productivity Improvement</li><li>(4) Market Development</li></ol> |
|--|

Moreover, these tasks have close relations with each other, so that we tried to indicate the correlation in a figure as shown in Table 10.1.9.

In order to study these tasks in detail, we tried to collect data concerned, which are shown in the margin of the table in cooperation with PKP Cargo.

Table 10.1.9 Major Tasks and Implementation Matrix

(Draft)

Special Feature Program

	MAIN TASKS				INCIDENTAL TASK		Remarks
	Marketing Development	Cost Reduction	Productivity	Treatment of Deteriorated facilities	Excess Personnel	Excess Assets	
Service Route	↔	☆ - Closing non-profitable line, yard	⇒	- Diversion or Disposal	↔	↔	Yard: 10 -> 5 Siding: 1600->240
Front (Station) System	↔	☆ - Eliminating non-profitable train	⇒	- Diversion or Disposal	↔	↔	
	↔	☆ - Closing front in non-profitable line	⇒	- Diversion or Disposal	↔	↔	
	↔	☆ - Closing non-profitable front	⇒	- Expanding sales area	↔	↔	
		- Wider booking system collecting container			↔		
		- Building track terminal and container terminal			↔		
		- Stenghening sales of transport			↔		
	☆	- Building up 8 logistic centers ⇒	⇒		↔		Absorbing 1,500 per./center
Transport System				- Outsourcing			
			⇒				
			⇒				
			⇒				"Ost Wind"
			⇒				"Ferry Train" for Sweden
				- Providing long haul train due to efficiency			
	☆	- Introducing advanced transport system					"SUW2000" for Lithuania "Jaroslaw" for Ukraine
	☆	- Introducing new information system ⇒					
Transport capacity and Target		- Evaluating capacity for load	⇒	⇒		⇒	While demand decreased
Facility & Rolling Stock				- Disposal of Needless facilities			
				- Rehabilitation of facilities			
				- Introducing new facilities			Investment required
			- Consolidating maintenance sites (workshop) into a few of sites ⇒		↔		
Personnel			☆	- Cancelling contract between passenger companies ⇒	↔		Influence on client companies
Relation with affiliated company				- Reviewing organization ⇒	↔		
	- Grouping PKP Cargo league			- Grouping PKP Cargo league			
				- Outsourcing saleswork and operation	↔		
Tariff							
Other action		☆ - Exempting taxation on fuel oil & other					
		☆ - Lightening burden caused by TAC					

(Study)  
Structure of taxation and amount accounted in total cost  
Amount of TAC accounted in total cost

(Study)  
Transport volume in each line (Present & Future demand)  
Traffic volume (no. of train) in each line (Present & Future demand)  
☆ Cost accounting system of train  
Earning rate for evaluating "profitable"  
Condition among PLK & Other carrier companies

(Study)  
Rolling Stock, facility  
Owner (Cargo, other carrier, client)  
Usage (freight, passenger)  
Condition (availability & Lifetime)  
Allocation

(Study)  
Handling volume each front  
(Cost shall be involved in train cost.)?

(Study)  
- Human Resource Allocation

(Study)  
PKP Cargo's Management Plan  
Including Relation between PKP Cargo and LHS

☆ : Special Feature Program  
↔ : Negative influence  
⇒ : Positive influence

## **10.2 POTENTIAL SOLUTIONS**

According to the long term transport demand forecasted by analysis in this report, the railway freight traffic is expected to decrease by 8% approximately in 2006 and 22% in 2010 against 155 million ton in 2002 in the pessimistic (lower) case. Under the circumstances, traffic of coal, the biggest bulk commodity in PKP Cargo, is dropping down to as much as 68% of that in 2002. Thus PKP Cargo is definitely required to reform the business methods radically by developing new commodities in order to maintain or increase the total traffic in domestic and international transport.

At the time PKP Cargo was split from the old PKP S.A. in 2001, meanwhile, the new organization accepted some redundant properties including excess personnel. From technical point of view, furthermore, some important jobs were all not transferred successfully. For example, making diagram of freight trains, PKP Cargo's products to meet freight customers' demand, was not transferred to PKP Cargo but to PKP PLK.

Furthermore, a huge number of drivers who handle locomotive, EMU and DMU even for passenger trains were transferred intensively to PKP Cargo. Therefore, PKP Cargo is forced to control huge number of drivers together with locomotives for passenger companies; PKP Regional and PKP Intercity besides its own business.

Regarding financial condition of PKP Cargo, the ordinary net profit was PLN 153 million as black in 2002. Through Poland's accession to EU in 2004, however, Polish economic condition shall be affected drastically by that of western countries, willy-nilly.

Furthermore, by negotiations with EU in opening Poland railway market to TERFN (Trans-European Railway Freight Network), a three-year transition act was settled in the second package involving EU Directive 12 specially for protecting PKP Cargo's business. In this scheme, international transport by foreign railways is forbidden by the end of 2006 except for transit transport in Poland. It means that railway freight transport market in Poland shall be opened completely at the beginning of 2007. Recently, it is reported that some railway freight companies have been reorganized in borderless international trade in the Western Europe. Under the circumstances, PKP Cargo is on the situation to have to accomplish all measures against severe international market as well as domestic by the time.

Therefore, it is a key for revitalizing PKP Cargo that has heavy burden as mentioned above to improve cash-flow by downsizing the enormous assets and by cutting down cost through productivity improvement. And it is also very important to encourage the present inner circumstance to make effort to develop new markets and clients.

### **10.2.1 Basic Conception of Solution**

In this section, the following are focused as major tasks in order to develop PKP Cargo for becoming a strong integrated logistic company and one of key companies among PKP Group.

Through the purpose of this study, that is, reform of Polish railways, these tasks should be clarified by making a distinction between PKP Cargo's own effort and the state assistance.

### (1) Revitalization of Freight Operation against Sluggish Demand

From the information we have already, it is clear that the challenges faced by the company arise from reduced traffic levels and the generally tight business environment. In the light of PKP Cargo's difficult business situation, it is essential to adapt conduct train operation closely to the transport demand, and to slim down fleets of rolling stock, personnel, facility, "left over" from the days of substantially higher traffic volumes.

### (2) Structural Reform

In order to compete effectively with road transport and other foreign railway freight operators, especially in the context of EU accession, there is a need to reform the internal structure of PKP Cargo and improve further the productivity of the organization through asset reduction.

Probably, some old business systems left behind the market developing rapidly might have caused the current lower work productivity. Raising staff's awareness of cost reduction is very important for the competitive business world.

Furthermore, PKP Cargo must also take the lead in developing a PKP Cargo "family group", involving also related companies and forwarders as well in order to establish an integrated and strong logistics organization.

### (3) Strategic Market Development and Investment

The company will need to ensure that it can establish a strong marketing position within those industries which are likely to develop most rapidly in the future – in particular those concerned with consumer goods. A wide range of services will need to be provided, either by the company itself or by partner organizations. Plans to establish a network of Logistics Centers form a part of this strategy, and will need to be progressed with some urgency.

Under the circumstances, it is indispensable to invest aggressively in intermodal transport systems, for which the company has been somewhat slow in making provision.

Given the right approach, PKP Cargo can achieve a strong position in the Polish freight transport market, especially while road transport that is struggling to develop against the background of the current slow development of the road network. The main issues to be resolved are how to provide a huge amount of the finance required, and how to grow the income from this field through aggressive marketing activity.

## 10.2.2 Procedure of Analysis

Downsizing of the organization is what should be given high priority in the above all measures for the re-vitalization.

In order to make an action plan for reforming the freight transport undertaking, it is indispensable to reveal the real condition of PKP Cargo as much as possible.

In this section, some procedures to know or analyze the current condition of the

organization through data we have been able to collect so far are explained first.

Furthermore, the most profitable or proper scale for PKP Cargo operation is estimated here.

#### (1) Cost and Downsizing

Generally, cash-flow analysis is essential for evaluating a business enterprise. It is a general principle that operation cash-flow generated from the railway business must cover the operation capital and investment in order to maintain the operation itself and then must enable the enterprise to pay back the debt or bond. According to cash-flow statement of PKP Cargo in 2002, the net cash-flow or free cash-flow is reported as PLN 86.7 million.

Developing PKP Cargo as an excellent company for ever needs the further improvement of this free cash-flow.

Since financial condition of PKP Cargo is analysed from another point of view in other part of this paper, some matters related directly with the business plan are focused here., that is, way how to cut down cost in order to improve the free cash-flow.

#### ( 2 ) Improvement from Reference scale

Since it is very difficult to evaluate the current operating condition precisely by a few data we have collected unfortunately, we attempt to grasp the situation as clearly as possible by the financial statement and statistic traffic data concerned.

Firstly as a starting point for studying, a reference scale should be set up from the present traffic volume and assets scale data such as the number of personnel, rolling stock and financial resources. After that, it can be started studying on how to reform or improve the present condition by basing on the reference scale and forecasted traffic demand in the future.

From this point, the condition can be calculated for reforming in both quality and scale through cost reduction and productivity improvement and so forth. This can be called here as a preparation process before formulating an action plan for the reform. At the same time, a hypothetical management base scale converted on the basis of the traffic volume in 2002 is formulated.

After that, a further new management scale is estimated for the end of 2006 and the end of 2010 as the short-term (Stage 1) and middle-term (Stage 2) targets. A point of time targeted on the end of 2006 means an epoch for opening Polish freight railway to TERFN.

We are using various kinds of data originated from PKP Cargo's activity in 2002.

There may be some opinions divided especially on whether or not the financial statement of PKP Cargo in 2002 shows the ordinary annual condition of PKP Cargo's management. However, there is no other choice but to utilize the data instead. It might be permissible to grasp on outline of PKP Cargo with some other data can be collected at least.

### 10.2.3 The First Downsizing from the Current Condition (Reference Scale)

In this process, a reference scale is established as mentioned above.

Some important factors should be explained here. Most of them can be brought out basically from differences between the traffic volume (ton and ton-km) in 2001 and that in 2002.

#### (1) Number of Personnel

At the time of PKP S.A. split at November 1, 2001, PKP Cargo accepted 52,754 employees. This number might have included some excess personnel because traffic volume and the former required staff number in 2002 had been estimated based on the situation of the organization before the commercialisation. Actually, traffic volume in 2002 dropped to 44.9 billion ton-km by over 10% from 49.9 billion ton-km.

Therefore, PKP Cargo may have received some 10% of the total number as excess personnel.

In this study, however, the number of excess personnel is estimated to be 7%, that is, 3,693 persons.

According to our calculation, the total number of personnel dropped naturally by 2,238 in one year from 52,754 to 50,516. The calculation result of the number of personnel in 2002, that is, 50,516, is explained in Table 10.2.1.

This means that number of excess personnel remaining among the total personnel of 50,516 is 1,455 persons ( $= 3,693 - 2,238$ ).

In the comparison with both traffic works in 2001 and 2002 on average with those of respective years, the actual traffic in 2002 dropped by 6.8% from the year before. So in this case, 2,927 persons can be estimated as excess personnel devised from categories except for the management shown in Table 10.2.2. The man-power in management division has little relation to actually decreased traffic volume, and the personnel in this sector should utilize their man-power to practical work for the future increase of development. For all practical purposes, of course, some members should be replaced anytime with strong willed recruits to promote the organization improvement the company, even though the total number is maintained.

One very important point should be stressed here. There are an extraordinarily large number of staffs belonging to the so-called management department or section. Some data indicate that 13.97% of the total number of personnel is working for this sector. (See Table 10.2.2)

Table 10.2.1 shows the relation of the total number of personnel and excess employees in 2002 and this becomes a reference scale of further estimation.



**Table 10.2.1 Reference Scale of Personnel**

(Persons)

	Reference Scale (2002 base)	Remarks
Total (2002)	50,516	Averaged from 2002 and 2003
Excess total	4,382	
Excess (1)	(1,455)	Remaining from the start
Excess (2)	(2,927)	Caused by dropped traffic volume in 2002
Personnel required	46,134	

Total number, 50,516 is estimated from average of numbers at the beginning of 2002 and 2003:  
(51,247+49,786)/2 = 50,516.

Table 10.2.2 shows the number of personnel categorized by job. As mentioned above, there are 4,382 excess persons included in the total.

**Table 10.2.2 Number of Employees (2002)**

(Persons)

Job Category	Ratio (%)	Number of personnel	Remarks
Management	14.97	7,562	Including unknown 1%
Operation	76.62	38,706	Sales, operation, etc.
Maintenance	8.41	4,248	
Total	100	50,516	

Ratio of each category shows the case in PKP Cargo.  
Number in each category is calculated for this paper.

The number of management staffs, 7,562 persons, who may have indirect relation with transport work dropped should be adequately reduced in the near future.

## (2) Rolling stock

### 1) Locomotive

Basically, the number of rolling stock, especially locomotives, required for operation is estimated in comparison with operation work data, that is, locomotive-km in 2002. However, the result indicates only a number of locomotives that are operated actually for service operation. Of course, we must calculate the number including stand-by or reserve locomotives for maintenance and emergency and the like.

The number of locomotives is estimated as shown in Table 10.2.3.

**Table 10.2.3 Number of Locomotives (2002)**

Type	2001	Reference Scale (2002 base)	(Car)
			Balance
Electric Locomotive	1,762	1,543	219
Diesel Locomotive	2,054	513	1,541
Total	3,816	2,056	1,760

As the result of estimation based on the operation data of 2002, the total number decreases drastically. In the case of diesel locomotives, three fourth of the existing cars are not in use, if the data are reliable. It might be caused by the stop of use of shunting locomotives due to many recent closures of marshaling and shunting yards. (One publication reports that 100 marshaling yards and 223 shunting yards were closed. Japan Railway & Transport Review 26, Feb. 2001)

Table 10.2.4 shows the number of locomotives chronologically. PKP has adjusted the total number according the transport volume. Since 1998, the total number has decreased by 596 locomotives until 2001.

**Table 10.2.4 Number of locomotive (Transition)**

	(Car)		
	1988 <sup>(1)</sup>	1998 <sup>(2)</sup>	2001 <sup>(3)</sup>
Electric Locomotive	2,301	1,940	1,762
Diesel Locomotive	3,892	2,472	2,054
Total	(100) 6,193	(71.2) 4,412	(61.6) 3,816
(Reference)			
Transport Work (Bn ton-km)	(100) 120.7	(51.2) 61.8	(38.5) 46.5

(1) World Bank Database (2003)

(2) Jane's World Railway 2002-2003

(3) Annual Report (2001), PKP Cargo

Locomotives used by LHS are not included in the number in 2001.

On the other hand, the further detailed data, such as those on the condition or lifetime of each locomotive have not been collected. Some information suggests that the average life time of rolling stock is around 21 years.

## 2) Freight Wagon

In the case of freight wagons, it is very difficult to properly estimate the number needed for the service because there are various kinds of wagons to meet the usage or commodities.

Fortunately, we received very clear data about freight wagons from PKP Cargo and some estimation can be guided from them.

Table 10.2.5 shows the number of freight wagons. Since 2001, PKP Cargo has

procured 3,816 cars. The increased number consists of 727 covered wagons (Type G1-H2), 2,564 open wagons (Type E5, F6) and 527 flat wagons with some wagons removed from the register. Table 10.2.6 shows breakdown data of the condition of wagons in 2003.

**Table 10.2.5 Number of Freight Wagons**

Category	(Car)	
	2001 <sup>(1)</sup>	2003 <sup>(2)</sup>
Freight Wagon (PKP Cargo)	90,185	94,001
Leased Wagon	39,828	Unknown
Total	130,013	-

(1) Annual Report (2001), PKP Cargo

(2) The latest data from PKP Cargo

**Table 10.2.6 Condition of Freight Wagons**

Total	(Car)			
	Under Service	Under Repair	Under waiting	For Scrap
94,001	61,150	4,297	16,860	11,694

Even though the detail data about other conditions of freight wagons have not been collected, the number of wagons needed for the service is estimated as 73,877 cars. This number is given by deducting wagons for scrap and half of cars under waiting repair.  $(=94001-11694-16860/2)$

### (3) Facility

In this paper, it is impossible to make estimation on facilities due to lack of data. However, the number of personnel concerned is estimated in comparison with traffic volume and so forth.

Through the study mentioned above, a reference scale can be formulated on the basis of the actual data of 2002 as shown in Table 10.2.7.

This index may not indicate clearly the current condition of PKP Cargo but it is enough to grasp an outline or tendency of the company to reform by sliming down or improving the productivity.

**Table 10.2.7 Reference Scale (Index)**

Item	Unit	Base Data (Result in 2002)	Reference Scale (Base on 2002)	Balance
Traffic Volume	Mln ton	155.1	155.1	-
Transport Work	Bn ton-km	44.9	44.9	-
Route Length	Km	18,550	18,550	-
Personnel	Per.	50,516	46,134	4,382
(Major Properties)				
- Rolling Stock	Car			
Electric Locomotive	Car	1,762	1,543	219
Diesel	Car	2,054	512	1,542
Total	Car	3,816	2,055	1,761
Wagon	Car	90,185	73,877	16,308
- Station				
- Marshalling Yard				
- Depot				
- Other				
Income	Mln PLN	5,923	5,923	-
Cost	Mln PLN	5,549	4,841	708
Profit (Loss)	Mln PLN	374	1,082	- 708
Rate of Profit		0.063	0.183	

#### 10.2.4 Cost Down

From this section, we will consider about cutting off the present useless or unnecessary works in the present through productivity improvement activity in order to cut down the cost

There may be various kinds of programs about improving the productivity in PKP Cargo.

In advance, we had some menus for the program of productivity improvement in Table 10.1.8.

However, it is very difficult to quantitatively analyze the current condition in detail due to a few data about sales activities.

Picking out some symbolic examples for remarkably cutting down the cost, therefore, we are going to analyse the present casual work method for effective improvement.

(1) Cancellation of a lease contract on locomotive and driver

Since the beginning, PKP Cargo has managed to control enormous number of driver for passenger railway companies besides its own operation.

At present time, however, PKP Cargo is in the situation to urgently build up high management efficiency, and so this company has to slim down the scale and concentrate its energy on its own business, that is, freight transport and development of new market in order to survive severely competitive freight transport business and

remain a key company among PKP Group.

Continuing the leasing business will cause the following other problems or risks to PKP Cargo.

- 1) Passenger companies may introduce further advanced rolling stocks including electric multiple units (EMU) with expectation for the future benefit. That will definitely cause excess locomotive to PKP Cargo management.
- 2) PKP Regional has huge tasks of unprofitable business especially in local lines. Through negotiation with the state and local governments the company might be split into further smaller companies. In some case, some lines of the current service area of PKP Regional may be closed due to various kinds of financial reasons. This will be similar to the risk to PKP Cargo as mentioned in the above item.
- 3) With regards to cash-flow, delay of payment from the customers will cause big troubles to PKP Cargo's management. According to the financial statement in 2002, PKP Cargo gained 10% of all income from the customers.
- 4) From brief analysis in this study, it becomes clear that the customers do not pay enough to PKP Cargo in the contract. Furthermore, the matter is what the loss becomes fainter and the negative condition is put out sight in the great mass of PKP Cargo.
- 5) As a potential matter, locomotives and drivers needed for passenger companies are controlled in the condition jumbled together with freight train operation. Under the circumstances, it is very difficult for PKP Cargo to improve operational productivity, for example, maintaining all the stand-by locomotives and drivers even for passenger companies has been shifted onto PKP Cargo's responsibility whether large or small.
- 6) For the time being, PKP Cargo is controlling drivers of EMU and DMU as well. In considering the technology transfer to these drivers for the future, it is very important for PKP Cargo to reconsider the leasing contract immediately.

In this process mentioned above, there are some secondary matters as follows. However, these should be discussed on how to resolve them among all the parties concerned including the state government.

- Treatment on assets like rolling stock, driver and facility to be left from PKP Cargo
- Ironing out the condition with labour union that must have strong objection against this plan.

Cancelling the leasing contract can cause some merit for PKP Cargo from the economical viewpoint.

Under some presupposition, the following result can be obtained.

This estimation is basically calculated by using data of locomotive-km of passenger and freight train in 2002.

Table 10.2.8 shows some assets including personnel that can be removed from PKP Cargo in the case of cancelling the leasing contract. So far,

**Table 10.2.8 Asset Removal**

Description		Amount	Remarks
	Driver	8,498	Incl: Administration
Personnel	Maintenance staff	690	
	Total	9,188	
	Electric Locomotive	472	
Locomotive	Diesel Locomotive	217	
	Total	689	
Depot		9	

On the other hand, Table 10.2.9 shows income and expenditure in the same case.

As shown in the Table, PKP Cargo will be able to improve balance between income and expenditure by cancelling the contract.

As mentioned above, this negative matter has been hidden behind huge amount of cost in PKP Cargo since the beginning.

PKP Cargo as a private company should never shoulder these burden absolutely, much less with other technical burden.

**Table 10.2.9 Income & Expenditure**

(Mln PLN)

Item	Amount
Income	633
Cost	
Depreciation	20
Material/Energy <sup>(note)</sup>	175
TAC	-
Outsourcing	228
Tax & Charge	-
Wage	296
Other	-
Total	707
Balance	- 86

(note) Estimated: Diesel oil has been involved in the lease contract.

## ( 2 ) Productivity Improvement (case-1)

There must be many potential menus (cost-down) that should have been improved in huge organization, generally. We study here about how to gain higher productivity by changing operation method of locomotives.

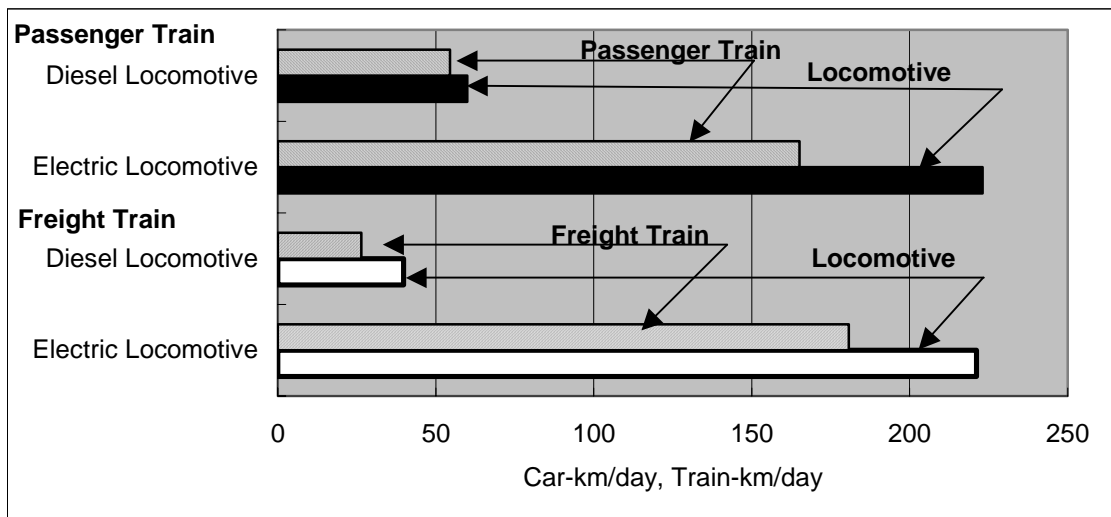
The following data in Table 10.2.10 is extracted from a PKP statistics document of

2002.

Fig. 10.2.1 indicates relation of train and locomotive that hauls it in operation.

**Table 10.2.10 Operation of Locomotive & Train**

Description			Freight Train		Passenger Train	
			Electric Locomotive	Diesel Locomotive	Electric Locomotive	Diesel Locomotive
(a)	Locomotive	Car-km/day	221.1	39.8	223.1	60.0
(b)	Train	Train-km/day	180.7	26.3	165.1	54.5
(a/b)	Ratio	%	122.5	151.5	135.1	110.0



**Figure 10.2.1 Locomotive & Train**

A careful comparison of the operation distances expressed in train-km/day shows that the average locomotive travels longer distances than it should, regardless of whether it is hauling passenger or freight train.

This is definitely natural in case of train hauled by locomotive because a locomotive has to go and come to the train position in stabling yard and depot for the haulage before and after operation service. But there must be some room to improve this condition. In the case of freight train that is hauled by diesel locomotive, especially, locomotive-km is far longer than train-km.

Exactly, diesel locomotives are used for shunting in yard, so that it has tendency to have longer single running in comparison with electric locomotives.

This data may include some running distance for shunting in the yard.

There must be another reason hidden behind this data. Since the beginning, operation company has never drawn its own operation diagram by itself. The operation diagram of each train has been established by PKP PLK. However, this diagram should have

been involved many important matters for operation company;

- 1) How to operate rolling stock and trains efficiently
- 2) How to control drivers efficiently and safely
- 3) How to operate trains economically
- 4) How to operate train service to meet client's requirement

According to some information, there has been actually many troubles occurred in the process of making up diagram before starting new operation service, so far.

Furthermore, even after opening the service, many people in PKP Cargo are forced to work more due to for troubles and it is doubtful whether the diagram prepared by the other organization is the best for its service, such as efficiency, economy, safety, human affairs and especially meeting the client's requirement.

Necessity of process change in drawing the diagram will be mentioned later in this section.

Under the assumption of PKP Cargo drawing its own diagram, some productivity improvement, that is, operating efficiency of locomotives and drives can be made by itself.

**Table 10.2.11 Efficiency of Locomotive Operation  
(Freight Train)**

	Electric Locomotive	Diesel Locomotive	Total / Note
Current Loco-km	221.1	39.8	260.9
Loco km / Train km	122.5	151.5	See Table 10.2.10
Improved Ratio	110.2	136.4	Improvement 10%
Improved Loco-km	198.7	35.8	234.5
Improvement Ratio			89.9%

In this simple estimation, some reduction on the current number of driver and locomotive can be expected as productivity improvement by considering the increase of working efficiency of locomotive and driver. Exactly, this doesn't mean that 10%-cut ratio of locomotive running against train affects simply and directly number of locomotive and driver to be dropped because of some (low) efficiency factor existing in operation works. Therefore, the number might be reduced by smaller ratio than the 10%.

#### ( 2 ) Productivity Improvement (case-2)

In the current freight operation, one fourth of number of freight trains is operated by a couple of drivers due to labor union's request.

It is unknown what the real reason behind the labor union's request is.

After discussing about how to maintain safety and working condition of driver with



labor union, it should be improved the productivity as a private company that is pointing toward a strong freight transport firm in the competitive world.

Simply, number of drivers can be cut down drastically by considering the present working efficiency of driver.

### **10.2.5 Service Distance Scale of PKP Cargo**

Let's consider profitable or appropriate operation service distance (km) for PKP Cargo's management. Figure 10.2.3 shows relation between the service distance and other factors that are referred from the result of PKP Cargo's activities in 2002. This graph may indicate some macro tendency of the management rather than the real situation because the data gathered from PKP Cargo are very few, unfortunately. It is fully trustworthy, however.

In this graph, in order to make sense of what freight transport is, values concerning passenger companies, PKP Regional and PKP Intercity to which PKP Cargo is leasing locomotive and driver are excluded. The graph has section traffic in ton/day in the x-axis and double scales in the y-axis; one is a scale of operation service distance (km) combined with the transport work in ton-km/year of each territory in the lower part and another is combined with income and the cost in the unit of Mln PLN in the upper. However, each bar (graph) showing transport work above 10,000 ton/day indicates amount summed up by every 5,000 ton/day territory, for example, in case of a bar at "> 15,000 ton/day", the bar indicates total amount accumulated from 15,000 up to below 20,000 ton/day.

According to the achievements (155 Mln ton and 44.9 Bn ton-km) of transport in 2002, this graph means that PKP Cargo operated freight trains in all 18,550 km as the operating service distance in order to cover the traffic all lines including small volume of less than 1,000 ton/day. Actually, PKP Cargo gained PLN 374 million as the operation profit through this transport work. However, the traffic volume mentioned above does not include that of military use and business use of railways.

According to PKP PLK's annual report, the track distance of PKP PLK in 2002 was 23,500 km.

As shown in the figure, the required distance goes up rapidly in the area of section traffic that shows 3,000 ton/day or less.

Meanwhile, in the upper part of showing income and cost, both of cost and income are in balance each other at the point of traffic volume of 10,000 ton/day or less and the longer the service distance is, the larger the profit increases from the point to a certain point.

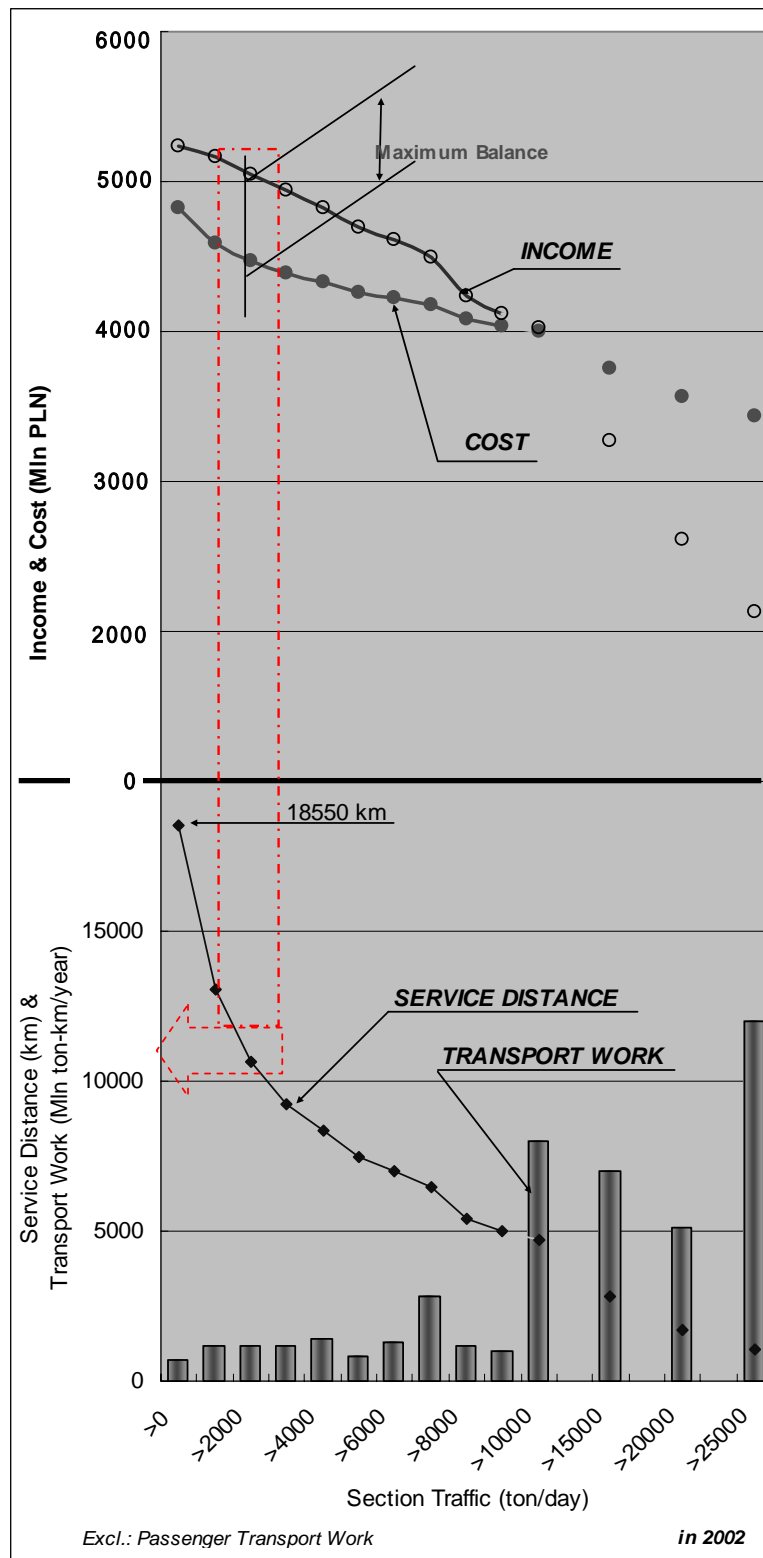


Figure 10.2.2 Service Distance and Profit

This means that gaining profit from the transport service requires service distance that

is more than some 5,000 km long covering traffic volume of less than 10,000 ton/day due to its present huge resources, because most of income gained from transport work disappears for covering the fixed cost in this shorter territory.

It is not a realistic story, but PKP Cargo can not gain any profit in the transport distance that is shorter than 5,000 km under the present cost structure.

This suggests that proper service scale and minimized transport (fixed) resource should be balanced in PKP Cargo management as mentioned below.

PKP Cargo gained the operation profit through 18,550 km long service distance in 2002. However, the most profitable part can be seen roughly at the point of the section traffic showing 2,000 ton/day from the upper part of the graph. From this relation in the graph, PKP Cargo can select around 11,000 km as the most profitable service distance from the present management strength.

The operating income and cost of the above two cases are compared in the Table 10.2.12 in calculation. As indicated in the table, PKP Cargo can obtain more profit (by PLN 212 million) in 11,000 km than that in 18,550 km.

**Table 10.2.12 Bigger Profftt Gained in Shorter Service Distance**

Section Traffic	Operation Distance	Transport work	Income	Cost	Balance
(ton/day)	(km)	(Bn ton-km)	(Mln PLN)	(Mln PLN)	(Mln PLN)
> 2,000	11,000	43.0	5,204	4,491	713
All	18,550	44.9	5,287	4,786	501
Balance	- 7,550	- 1.9	- 83	- 295	<b>212</b>

This estimation is calculated by basing on PKP Cargo's activity in 2002.  
Income and cost do not include value related with passenger companies.

PKP Cargo has some tasks in the management as mentioned above.

The operating factors concerned can not be identified exactly and clearly from the figure, but it can be seen that huge amount of assets and personnel, that is, the enormous fixed cost is heavy burden on the management.

PKP Cargo is required to cut down the cost and to improve the productivity.

And, even in case of the operating condition in the future lower demand, the further reduction of the cost will not cause any change in the tendency shown in the figure, and so the proper operation distance of PKP Cargo must be kept within the territory of less than 11,000 km. Actually, the demand forecast of 2006 and 2010 says that relation between the section traffic, 2,000 ton/day and the length, 11,000 will be maintained in either case, optimistic or pessimistic case.

For specifying the individual line to be operated in PKP network is required some detailed survey on modal share of transport market for the present and the future. However, in this study, the transport share of railway and road is not analyzed in detail, and so the final decision shall be made by a thorough investigation of freight railway market.

On the other hand, there may be another way to settle operation service scale, that is, “break-even” scale which shows profit/loss balanced in the business activity. As mentioned above downsizing the network of PKP Cargo is not easy because of the present customers and other operators like passenger railway companies that are operating together with PKP Cargo in the profitless territories. Furthermore, it is also very difficult for PKP Cargo alone to slim down huge number of excess personnel in short time. Then, in some case, PKP Cargo may have to take break-even scale as another choice to carry the excess personnel in the organization for a while. As mentioned later, this paper puts break-even scale in the action plan for PKP Cargo.

In order to officially decide the operating service scale of PKP Cargo, it is required to re-arrange the specific service route through negotiation among the concerned parties, such as PKP Regional, PKP Intercity, PKP PLK, PKP S.A. and the state government. The Government has its policy on military use or the like in advance. (A picture attached in this paper shows the freight transport routes covering lines of sectional traffic volume over 2,000 ton /day)

Of course, PKP Cargo might stand in the situation to be able to request the Government assistance in the case of the service distance beyond PKP Cargo’s responsibility or over 11,000 km approximately.

#### **10.2.6 Action Plan on Sliming down and Reinforcing PKP Cargo**

Table 10.2.13 shows an action plan for building up a proper management scale of PKP Cargo with significant cost reduction and productivity improvement as mentioned above.

This is to slim down the scale of PKP Cargo to meet the forecasted demand targeting at the end of 2006 and 2010. And as shown in Table 10.2.13, this study puts a target for privatizing PKP Cargo at some early point until 2010 because we expect restructuring work we have proposed would be quite promoted until the time, even though it is not completed and moreover PKP Cargo will have an epoch to open the Polish railways completely to the strong competitors from the western and eastern at the beginning of 2007.

In Table 10.2.13, firstly, cost reduction and productivity improvement will be implemented in transport scale of 2002 and then, the achievement, or result of the first sliming down activity will be used for planning the management scale in each target year, in 2006 and 2010.

On the other hand, there are two alternatives in this plan, one is a plan as “without”, not to shorten the operating distance and another is a plan as “with”, to shorten it down to 11,000 km by counting on the best profitability of PKP Cargo. Furthermore, as an alternative, “break-even” scale with excess personnel inside the organization is set in the plan shown in Table 10.2.13. In this plan, all the excess assets excluding excess personnel shall be disposed as much as possible. However, most of excess personnel shall be carried in the organization excluding some 3,700 persons that can be estimated 2,000 for PKP Regional and 500 for PKP Intercity in canceling the lease contract and some 1,200 for PKP Cargo’s own Downsizing. In this case to get “break-even” of the management, the service distance is estimated some 15,000 km.

The calculation in this plan is based on unit cost brought from the financial data in 2002.

Some factors that have been studied for downsizing so far in this paper are programmed into this table. Even in the second stage (target year: 2010), PKP Cargo is expected to be black in the balance between income and cost. However, PKP Cargo will have to experience some severe pain in the processing so as to accomplish the sound condition economically, for example, by cutting down considerable labor force directly or through drastic system change.

Moreover, in this study, some factors, such as non-efficiency hidden behind the huge organization are not revealed, and therefore it is definitely necessary to investigate the condition in detail and establish the re-vitalization program.

#### (1) Preparation for the future

It is insufficient only to slim down the scale. It is definitely required to reinforce management strength for the future as well, so that rather big cost for rehabilitating rolling stock chiefly is built in this plan. The rehabilitation shall be implemented on the rolling stock, locomotive and freight wagon which number shall be at 2006 in 7 years up to 2010. In some case, this fund may be used for replacing old rolling stock by advanced one with interoperability or the like. The present rolling stocks have allegedly average lifetime 21 years (Detail data has not been collected). In case of locomotive, 46% of the entire locomotive shall be unnecessary by slimming down, and therefore the average lifetime will be drastically younger by screening them out.

However, preparation like invest on assets for the future will be definitely necessary.

#### (2) Acceptable TAC

In the process of making the reference scale based on actual transport works in 2002 only by slimming down excess assets succeeded from the old PKP, total cost is compressed approximately by 11.2%. In this stage, the ratio of TAC of the total cost increases from 29.6% to 33.3%.

Meanwhile, after definite effort of cost down by further downsizing and productivity improvement, the total cost can be cut down to PLN 4,087 million excluding the rehabilitation cost amounted PLN 872 million on the same transport works, 44.9 Bn ton-km. However, the weight of TAC increases to 40.2% of the total cost.

From the viewpoint of PKP Cargo, it might be possible to claim that acceptable TAC to PKP Cargo should be limited to the present level or less in order to encourage PKP Cargo to have an incentive for further management improvement.

Especially, regarding track access charge of freight transport in Polish railways, it is reported in this paper that it is rather high in comparison with other railways in EU in this paper.

Furthermore, it is also required that PKP PLK will have definite effort to rationalize its work in order to establish convincing rate of TAC.

TAC that does not make sense in public must cause not only PKP Cargo but also Polish railways fell apart.

Table 10.2.14 compares productivity of personnel, i.e. the relationship between traffic (ton-km basis) and number of personnel, between Poland and three major countries. The table also shows productivity of PKP Cargo that is expected in 2010 through estimation.

According to the estimation in this paper, PKP Cargo can expect some profit in dropped down traffic demand in the year. But this table suggests that there is plenty of room for further improvement in comparison with other foreign railways. However, it is very dangerous to further cut off the assets or property including personnel much more without detail data in this paper, and so that it is indispensable to thoroughly investigate thoroughly the present condition of PKP Cargo.

Table 10.2.13 Action Plan of Downsizing and Privatization of PKP Cargo

Item	Unit	Stage 1										Stage 2					
		2002	Preparation Process							2006			2010				
			Reference	Improvement (Without)				(With)	(Without)	(With)		(Without)	(With)				
			Down sizing on Traffic (Base)	Cancellation Leasing contract	Productivity	Maintenance Improvement (Rehabilitation)	Total	Cut-off profitless line	Total	Down sizing on Traffic Demand with rehabilitation	Cut-off profitless line	Total	(Breakeven) with excess personnel inside organization	Down sizing on Traffic Demand with rehabilitation	Cut-off profitless line	Total	
Traffic Volume	Mln ton	155.1			155.1			-		142.2	-	-			120.7	-	
	Bn ton-km	44.9			44.9			43.0		41.6	39.6	40.0			35.3	33.3	
	Mln train-km	73.3			73.3			-		-	-	-			-	-	
Service Distance	km	18,550			18,550			11,000		17,650	11,000	15,000			17,650	11,000	
Personnel	Person	50,516	46,134	-9,188	-1,498		35,448	-470	34,978	32,843	-433	32,410	46,800		27,869	-364	27,505
Excess Personnel	Person	(3,693)	4,382	9,188	1,498		15,068	470	15,538	2,605	433	3,038	3,716		4,974	364	5,338
Excess Personnel (Cumulative)	Person						15,068		15,538	17,673		18,106	3,716		22,647		23,011
(Major Property)																	
- Rolling Stock																	
Electric Locomotive		1,762	1,543	-472	-96		975		975	903		903	903		767		767
Diesel Locomotive		2,054	513	-217	-26		270		270	250		250	250		212		212
Total		3,816	2,056	-689	-122		1,245		1,245	1,153		1,153	1,153		979		979
Wagon		90,185	73,877	0	0		73,877		73,877	68,447		68,447	68,447		58,081		58,081
Wagon (Leased)		39,828															
- Station		1,495															
- Marshaling Yard		10															
- Depot		19															
- Other (Container Yard)																	
Income	Min PLN	5,923	5,923	-633	0	0	5,290	-224	5,066	4,901	-235	4,666	4,713		4,159	-236	3,923
Cost	Min PLN																
Depreciation		345	265	-20	-4	0	241		241	223		223	223		189		189
Material/Energy		835	835	-175	-40	0	620	-20	600	574	-18	556	574		487	-15	472
TAC		1,645	1,645	0	0	0	1,645	-428	1,217	1,549	-376	1,173	1,185		1,447	-398	1,049
Outsourcing		894	493	-228	-28	0	237		237	220		220	220		186		186
Tax/Charge		36	36	0	0	0	36		36	36		36	36		36		36
Personnel		1,630	1,488	-296	-48	0	1,144	-15	1,129	1,060	-14	1,046	1,510		899	-12	887
Others		164	164	0	0	872	1,036		1,036	960		960	960		814		814
Cost Total		5,549	4,926	-719	-120	872	4,959	-463	4,496	4,622	-408	4,214	4,708		4,060	-425	3,635
Profit (Loss)	Min PLN	374	997	86	120	-872	331	239	570	279	173	452	5		99	189	288
Rate of Profit		0.063	0.168				0.063		0.113	0.057		0.097	0.001		0.024		0.073

(note 1) Estimated by JICA Study Team

(note 2) Averaged by numbers at the beginning of 2002 and 2003

(note 3) 7% of number of personnel (52,754) transferred from the old PKP at November 1, 2001

(note 4) Summed up excess number caused by down sizing and number remained from original excess number. (= 2,927+ 1,455) 1,455 : excluded natural drop from 52,754 in 2002.

1,455=3,693-(52,754 - 50,516)

**Table 10.2.14 Productivity of Employees (2001 /2010 )**

Year	Company	Traffic	Employee	Productivity
		(Bn ton km)	(person)	(Mln ton-km/person)
2010	PKP Cargo	35	27,505	1.27
		46	52,472	0.88
2001	DB (Cargo)	74	32,440	2.28
	SNCF (Cargo)	52	15,540	3.35
	JR Freight	22	8,709	2.53

### 10.2.7 Structural Reform

We have studied cutting down the operation cost so far by sliming down the structure and improving the productivity quantitatively as much as possible. In addition, some tasks as shown in Table 10.1.8 will be reviewed hereunder.

#### (1) Treatment of deteriorated assets succeeded from the old PKP

The most massive assets owned by PKP Cargo are rolling stocks. Currently, there are 3,816 locomotives and 90,185 freight wagons except for 39,828 leased wagons. In case of locomotive, approximately 60% of the number is estimated to become unnecessary. In this study, unfortunately, the individual data thereof has not been collected, but it is possible to estimate that there might be many deteriorated or heavy damaged rolling stocks as candidates to be abolished. This means that most of deteriorated rolling stocks transferred from the old PKP can be disposed of. The situation is also same for freight wagons. The remaining rolling stock shall be rehabilitated thoroughly.

Meanwhile, it is also important to consider the facilities that have been used for transport works or rolling stock inspection and repair. In this paper, it is not mentioned about facility condition due to lack of data, but it is possible to consolidate them by closing some facilities in case of transport work decreased. In the process, some facilities or machinery must be replaced by advanced ones.

#### (2) Cost reduction; labor, Energy Cost and TAC

3 items of costs; energy, TAC and labor cost amount to 74% of total operating cost in 2002. It is very important for the management to cut down these costs.

**Table 10.2.15 Cost Structure (2002)**

Item	Mln PLN	%
Materials/Energy Cost	835	15.0
TAC	1,645	29.7
Labor Cost <sup>(note)</sup>	1,630	29.4
Outsourcing Cost	895	16.1
Others	544	9.8
Total	5,549	100

(note) Included some cost concerned



## 1) Labor Cost:

Regarding the labor cost, it is expected to reduce by 30% at the base of the 2002 year in the action plan of this paper (including cancellation of lease contract). However, it might be better to reduce the management staff, which currently stands at 13.97% of the total personnel at present. Generally, if the number of staff is categorized by head office and regional ones, it must be less than 5 % for the head office and the total of management staff including regional office must be up to 10%. After examining the personnel structure of the management, it must be cut down drastically.

As a matter of course, personnel-cut will cause pain to them, and so it is indispensable to provide them with warm-hearted arrangement, such as re-education for the future job and provision for funds for the project.

## 2) Energy Cost:

In case of energy cost, it is expected to reduce by 5 % (PLN 40 million) by improving the productivity of locomotive operation. This amount does not include cost of diesel oil used in leasing contract. (See Table 10.2.13)

Moreover, the taxation isn't mentioned in the action plan of this paper, but the energy cost is also expected to fall a little by the exemption of tax on road finance in the diesel oil tax.

Table 10.2.16 shows tax structure of diesel oil cost expended by PKP Cargo in 2002. This means that the tax- exemption on road finance will lead to the great cost-cut ( PLN 40 million annually) in PKP Cargo. This is calculated in the result of 2002 including diesel oil for passenger train. However, cost-cut by exempting the tax amounts to 0.7% of the total cost.

It is necessary to appeal to the government for proceeding with the tax law promptly.

**Table 10.2.16 Oil Cost & Tax (2002)**

Item	Mln PLN	%
Diesel Oil Cost	291	
Commodity Tax	133	45.6%
Tax for road	40	

Road finance tax is involved by 30% in commodity tax.

Commodity tax is involved by 45.6% in the oil price. (Average)

## 3) TAC:

It is very difficult only by PKP Cargo's one-side opinion to judge whether or not the level of TAC amount is reasonable.

PKP Cargo's expenditure about TAC amounts to 30% of the total cost in 2002 and it goes up to 34% just after cost that can be controlled internally being cut down by following transport works decreased in the same period.

PKP Cargo is going to further improve the structure, so that it is expected to make a rule

of the charge so as not to hamper the incentive of the operating company.

#### 4) Other cost:

Other than that, there are many menus that PKP Cargo has to tackle for improvement including cost-cut. In this study, profitless train that PKP Cargo may have been operating could not be identified. Thus, there must be some profitless trains left in the cost-cut action plan of this paper.

It is indispensable to establish an advanced cost accounting system of individual train and encourage staff in charge to change their minds for cost awareness in order to abolish profitless trains and not to build a single profitless one.

On the other hand, it may be unfair not to say about some cost to be required additionally in the process of Downsizing. That is the cost for reinforcing the alternate facilities or the capacities instead of to the closed sales front, for example.

#### ( 3 ) Productivity Improvement

In this study, some items for which the considerable effect can be expected are selected for estimating improvement of productivity. However, there must be numbers of other items to be improved or rationalized in all over the working sites, such as consolidating the stations, marshaling yards and sales fronts, closing non-profitable lines.

Furthermore, there must be huge number of works to be improved in the working sites, and those should be resolved through something like TQC activities that have been standard technique in many railways.

Abolishing profitless lines is calculated roughly in the action plan but the detailed actual plan should be decided through further investigation.

### **10.2.8 Strategic Market Development and Investment**

It is clear that an enhanced marketing capability will be required if PKP Cargo wants to maximize its opportunities, and retain its key role in the Polish freight transportation scene. The company has in general a good marketing capability and a well-founded understanding of its markets. Nevertheless, there is scope for additional activity, and the following is recommended as the high priorities for the development of new market and profitable new services:

- (1) The company needs to establish a solid marketing foothold within those industries which are likely to develop in the future. Special attention will be needed in the area of intermodal traffic, where there is possibility of its market share increasing substantially.
- (2) In addition, the increase of its share in the transport of general consumer goods should be sought through the establishment of the chain of Logistics Centers, designed to provide rail-based distribution and storage facilities capable of dealing containers, swap-bodies and conventional wagons. Development of these centers needs to be promoted as quickly as possible, and so a clear view can be gained of the range of services to be provided and the associated investment requirements.

- (3) In conjunction with the above, early resolution must be sought of any outstanding legal ownership issues with regard to the proposed Logistics Center sites; the company's investments in these centers will be provided, in part at least, through the contribution of the land value of the sites.
- (4) Winning of new traffic will call for the ability to respond rapidly to requirements for wagon types not currently owned by the company. This is most likely to be achieved by close relationships with the operators of wagon leasing fleets. With regard to the operation of specialized rolling stock, in particular for trainload operation, there must be acceptance of empty return working with a view to maximizing wagon productivity.
- (5) While the likely extent and effects of Open Access competition are not clear, the company should seek to protect itself by giving special attention to the signing of new long-term contracts with customers who have significant volumes of traffic to offer. In practice, it is known to be already pursuing this solution, and the process should continue.
- (6) A number of opportunities for new service development will surely exist, for which detailed viability studies should be undertaken as quickly as possible. These include in particular the institution of Rollende Landstrasse (RoLa) operation between the Belarussian and German frontiers, where PKP will be able to offer the definite time savings to road haulers.
- (7) Revised train service networks are likely to be required in order to maximize intermodal traffic acquisition. These will need to be based on dedicated train operation for this traffic, rather than the use of the standard wagonload network.
- (8) The company must seek such amendment to existing legislation as may be required to ensure that it has sensible commercial freedom, and is not placed at a disadvantage to compare with road haulage and other rail operators. This particularly refers to the ability to refuse the traffic which cannot be handled profitably.

### 10.3 RECOMMENDATIONS

PKP Cargo will be able to continue the positive balance in the management even in a scene of traffic demand dropping in the future, but with great pains. And it will also be able to develop the structure as an integrated logistic company with great effort. Under the circumstances, PKP S.A. announced a selection process of consulting firms for actual privatisation of PKP Cargo on 17 October, 2003.

Through this study, however, it is recognized that some factors should be improved for the future privatisation of PKP Cargo in advance. Furthermore, in order to successfully carry out the aim and the end, there are some tasks beyond the freight railway operator's effort.

Thus, as a purpose of this study, we propose some recommendations which are classified into the self effort and the assistance from the Government as follows.

### 10.3.1 Self Effort

(1) Management Structure

Sliming down Headquarter drastically

Making up the train diagram by itself

(2) Cost awareness

Establishing the train cost accounting system

(3) Cancelling the leasing contract between Passenger companies

(4) Seeking for the further cost-cut menus on outsourcing

(5) Re-organizing sales fronts intensively

(6) Organizing PKP Cargo group

(7) Building up Freight transport information system covering wider market area

Trans-European interoperability/ International competitiveness

(8) Disposing of the surplus personnel

Establishing *Human Bridge Bank* for disposing of surplus personnel

(9) Positive investment

Developing the market

### 10.3.2 Assistance from Government

PKP Cargo is moving towards the establishment of sound management structures, but is hindered by the large quantity of assets transferred from the old PKP. Some elements of this problem can be handled through the company's own efforts, but others lie outside the company's capability to resolve. In these cases, PKP Cargo has no choice but to seek for the positive involvement and support of the Polish Government:

- Financial assistance for restructuring of employment, to overcome the problem of surplus personnel.
- Subsidy for the replacement of deteriorated rolling stock or facilities by new ones.
- Reduction on the tax of fuel, fixed property or other assets required for the development of rail freight transport in Poland.